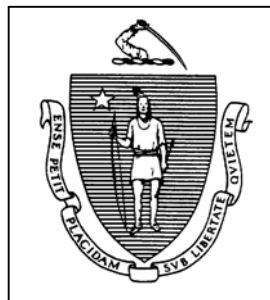
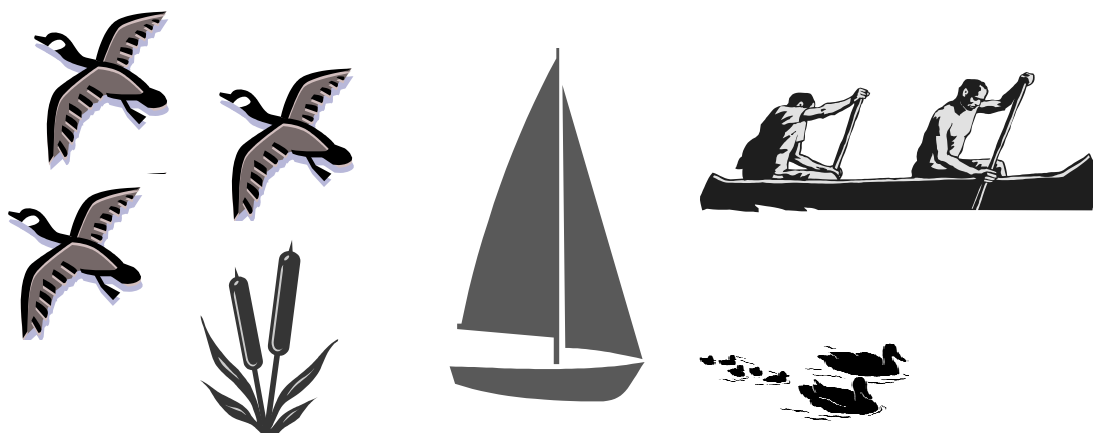


**MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION**



**Nonpoint Source Management Plan
Volume I**

**Strategic Summary
2000**



**EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
BOB DURAND, SECRETARY
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
LAUREN A. LISS, COMMISSIONER
BUREAU OF RESOURCE PROTECTION
GLENN HAAS, ACTING ASSISTANT COMMISSIONER
DIVISION OF WATERSHED MANAGEMENT
DAVID TERRY, ACTING DIRECTOR**

NOTICE OF AVAILABILITY

LIMITED COPIES OF THIS REPORT ARE AVAILABLE AT NO COST BY WRITTEN REQUEST TO:

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATERSHED MANAGEMENT
627 MAIN STREET
WORCESTER, MA 01608**

This report is also available from the [Department of Environmental Protection, Division of Watershed Management's](http://www.state.ma.us/dep/brp/wm/wmpubs.htm) home page on the World Wide Web at:

<http://www.state.ma.us/dep/brp/wm/wmpubs.htm>

NOTE: For web publication, corrections to the printed version of this report are highlighted in purple.

Furthermore, at the time of first printing, eight (8) copies of each report published by this office are submitted to the State House in Boston; these copies are subsequently distributed as follows:

- On shelf; retained at the State Library (two copies);
- Microfilmed; retained at the State Library;
- Delivered to the Boston Public Library at Copley Square;
- Delivered to the Worcester Public Library;
- Delivered to the Springfield Public Library;
- Delivered to the University Library at Umass Amherst;
- Delivered to the Library of Congress in Washington, D.C.

Moreover, this wide circulation is augmented by inter-library loans from the above-listed libraries. For example, a resident of Winchendon can apply at their local library for a loan of any DEP/Division of Watershed Management report from the Worcester Public Library.

A complete listing of reports published since 1963 is updated annually and printed in July. This report, entitled, "Publications of the Massachusetts Division of Watershed Management – Watershed Planning Program, 1963 – (current year)" is also available by writing to the DWM in Worcester.

DISCLAIMER

Reference to trade names, commercial products, manufacturers, or distributors in this report constitutes neither endorsement nor recommendation by the Department of Environmental Protection for use.

**NONPOINT SOURCE MANAGEMENT PLAN – VOLUME I
STRATEGIC SUMMARY**

Researched and Compiled by:

**Eben W. Chesebrough
and
Michael DiBara**

**Department of Environmental Protection
Bureau of Resource Protection**

Report Number: MS-E-7

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATERSHED MANAGEMENT
WORCESTER, MASSACHUSETTS**

APRIL 2001

TABLE OF CONTENTS

<u>ITEM</u>	<u>PAGE</u>
EXECUTIVE SUMMARY	ii
I. INTRODUCTION.....	1
II. REGIONAL COORDINATION AND THE NPS ACTION STRATEGY	1
III. MASSACHUSETTS WATERSHED INITIATIVE	4
A. General Description	4
B. Implementation.....	14
IV. TOTAL MAXIMUM DAILY LOAD STRATEGY	16
V. SHORT AND LONG-TERM STRATEGIES.....	26
A. NPS Program.....	26
B. Coastal Zone Management Program	32
1. TMDLs and Nitrogen Sensitive Embayments	33
2. Urban Areas	35
3. Marinas and Recreational Boating.....	40
4. Agriculture.....	42
5. Forestry	46
6. Hydro-Modification.....	48
7. Wetland Restoration and Assessment.....	49
VI. MAJOR ACCOMPLISHMENTS	51
VII. FUNDING/COMMUNITY RESOURCES	53
A. Nonpoint Source Funding	54
B. Community Funding.....	56
C. Program Descriptions.....	58
D. Technical Assistance	96
VIII. SUMMARY	108

MASSACHUSETTS NONPOINT SOURCE MANAGEMENT PLAN

UPDATE 1999-2000

EXECUTIVE SUMMARY

The Nonpoint Source Management Plan was originally developed by the Department of Environmental Protection in 1988 pursuant to Section 319 of the Clean Water Act (33 U.S.C.A., Sec. 1251 et. seq.). The current document (revised in 1994 and again in 1999) is a comprehensive update of the original plan. The updated Nonpoint Source Management Plan is presented in four volumes and what follows is an executive summary of the Management Plan in general and each volume in particular.

IN GENERAL

The Nonpoint Source Management Plan sets forth an integrated strategy and identifies programs to prevent, control and reduce pollution from nonpoint sources to protect and improve the quality of the waters of the Commonwealth. The Clean Water Act, Section 319, specifies the contents of the Management Plan to ensure that the plan realistically addresses all of the major categories of nonpoint source pollution in the state. It is important to understand that the plan is an implementation strategy for best management practices with attention given to funding sources and a milestone schedule.

The Massachusetts Nonpoint Source Program has developed as a dynamic and effective program characterized by the nine-key elements described in the “Nonpoint Source Program and Grants Guidance for Fiscal Year 1997 and Future Years” issued by EPA in May of 1996. The State program focuses on strong working partnerships and watershed-based solutions implemented through the Massachusetts Watershed Initiative.

Each year the Congress appropriates funds under Section 319 to assist the states in implementing their approved Nonpoint Source Management Plans. Only those implementation strategies contained in the Management Plan are eligible for federal funding. Implementation activities include regulatory enforcement, technical assistance, education, training, technology transfer and demonstration projects.

The current update of the Nonpoint Source Management Plan makes specific reference to the Coastal Nonpoint Pollution Plan mandated by Section 6217 of the Coastal Zone Reauthorization Act of 1990. This coastal plan was granted provisional approval in 1995 and has been adopted into the Section 319 Management Plan. The Coastal Plan strategies and enforcement policies will be implemented state-wide as appropriate within the context and schedule of the Watershed Initiative.

VOLUME I-STRATEGIC SUMMARY

This volume is a strategic summary of the 1999 updated Nonpoint Source Management Plan. It contains certain sections of the Management Plan that clearly focus on the core Nonpoint Source (NPS) Program and provides a strategic approach for the direction of the program for the foreseeable future. The Management Plan itself is contained in three volumes with over four hundred pages. This report distills much of the Management Plan into a more manageable format and keys into the strategic actions underway. It is hoped that the present document is both readable and usable for watershed teams, local governments, watershed associations, and other state/federal agencies that will be responsible for assisting in the critical nonpoint source implementation effort.

The sections of this summary report represent components of the overall state NPS Strategy as set forth in the NPS Management Plan, revised and upgraded in 1999 in conformance with EPA’s Nine-Key Elements. The overall goal of the NPS strategy is to preserve and augment the water quality of the waters of the Commonwealth which are impaired or threatened by nonpoint source pollution.

This goal will be addressed through the various program components described in the NPS Management Plan and summarized in this report. These program components will:

1. Provide regional guidance and assistance to the watershed teams and public to:
 - a. identify and prioritize NPS problems in each watershed,
 - b. develop specific grant proposals for implementation projects, and
 - c. target funding to these priorities to address and remediate NPS impacts to water quality.
2. Integrate NPS strategic actions into the Massachusetts Watershed Initiative (MWI) to achieve more targeted implementation.
3. Integrate Total Maximum Daily Load (TMDL) recommendations (which are mostly NPS BMPs) into the MWI to achieve effective implementation by the watershed teams and municipalities and thus attain water quality standards in the state's impaired waterbodies.
4. Identify short and long-term strategies for both the NPS Section 319 Program and the Coastal Section 6217 NPS Program and effectuate their implementation through specific segment-by-segment analysis and subsequent remediation by the watershed teams and DEP.

VOLUME II-NONPOINT SOURCE PROGRAM and the MASSACHUSETTS WATERSHED INITIATIVE

Volume II of the Nonpoint Source Management Plan sets forth a highly focused and structured nonpoint source strategy that is closely integrated into the Massachusetts Watershed Initiative. Each year a certain number of basins are scheduled so as to cover the entire state within five years.

Each year of the five year cycle focuses on a distinct set of activities with a common objective:

- Year 1 - Outreach, education and information gathering
- Year 2 - Water resource monitoring; outreach
- Year 3 - Water resource assessment; outreach
- Year 4 - Implementation of water quality corrective actions and BMPs; outreach
- Year 5 - Continued implementation and evaluation; outreach

Volume II of the Nonpoint Source Management Plan describes this statewide watershed initiative and how the 305(b), 303(d), and TMDL process all fit within the five-year cycle.

VOLUME III-STATEWIDE PLAN and GOALS

Volume III of the Nonpoint Source Management Plan is a technical update and revision of the original 1988 Management Plan. This third volume generally follows the original plan format and updates the state's nonpoint source related programs. Certain sections have been deleted, others added and still others amended to reflect programmatic changes and progress made by Massachusetts since the original plan was written in 1988.

As mentioned under Volume II, emphasis has been given to the emerging Coastal Nonpoint Pollution Plan authorized under Section 6217 of the Coastal Zone Reauthorization Act of 1990. The Coastal Plan has developed and will implement management measures to address nonpoint source categories of pollution common throughout coastal Massachusetts. It has been decided to apply the Coastal Plan's management measures state-wide. The Coastal Plan was essentially completed in 1995 and will be incorporated into the 319 Management Plan by way of addendum.

Volume III also stresses the watershed approach, the central theme of DEP's core Nonpoint Source Program as described in Volume II. The watershed approach is likewise a major tenet of the Clean Water Strategy which provides a conceptual framework for DEP's water resource programs.

Section VI of Volume III contains long-term strategies. Some of these long-term strategies are ongoing and some constitute new initiatives. It is felt that these strategies have high potential to prevent and abate nonpoint source pollution in Massachusetts. The long-term strategies are:

LONG-TERM STRATEGIES

- A. Implement the Massachusetts Watershed Initiative
- B. Title 5 Regulations For the Subsurface Disposal of Sanitary Sewage
- C. Soil Erosion and Sedimentation Control Law
- D. Stormwater Runoff Control
 - 1. Subdivision Control Law
 - 2. Chapter 90 Local Road Improvements
 - 3. State, County, Federal Roads
 - 4. Stormwater Management Policy Handbook
- E. Public Water Supply - Wellhead Protection Program and Other Programs
- F. Bay Programs
 - 1. Buzzards Bay and Mass Bays
 - 2. Waquoit Bay
 - 3. Narragansett Bay
- G. Cape Cod Commission - Sole Source Aquifer Protection.
- H. Rivers Protection Act of 1996.
- I. Outreach and the Mega Manual.
- J. Nutrient Loading Approach to Wastewater Permitting and Disposal.
- K. Develop and Implement TMDLs.
- L. Cooperate with Implementation of Section 6217 CZM Coastal Nonpoint Source Plan.

Volume III further describes how the original Nonpoint Source Advisory Committee has been replaced by functioning Watershed Teams. Each Watershed Team has many non-state representatives which act as individual watershed advisory committees. It is the watershed team which directs and prioritizes all of the basin activities within the context of the Watershed Initiative.

VOLUME IV-WATERSHED NONPOINT SOURCE ACTION STRATEGIES

The major purpose of the nonpoint source action strategies is to compile, segment by segment for each major watershed, the 303(d) impairments, other outstanding water quality issues, the data/information sources, and recommendations to address the water quality impairments.

The action strategies are designed to focus on the most pressing situations causing violations of the state's water quality standards based upon dependable and verifiable data sources. This volume of the NPS Management Plan will be updated, on the average, every two years.

The action strategies are meant to primarily assist the DEP regions and the EOEa watershed teams to focus their collective energies on priority water quality impairments. It is not intended to replace or compete in any way with the watershed team action plans.

The action strategies are also focused primarily on nonpoint source causes of the water quality impairments. These compilations are not intended to be encyclopedic regarding watershed water quality issues. The emphasis is upon 303(d) water quality impairments with recommendations of actions to address the situations.

The overall layout and format is intended to be brief and succinct with what we hope is just the essential information presented in an easy to read presentation. Several of the data sources listed are rather weighty volumes which may intimidate some of the more inveterate researchers. Thus the present effort to reduce a large amount of information down to some bare essential action recommendations. Any person interested in more detail is encouraged to consult any of the listed references (sources).

I. INTRODUCTION

The Nonpoint Source Management Plan was originally written in 1988 and approved by the U.S. Environmental Protection Agency in 1989 under the authority of Section 319 of the Clean Water Act. Since then the plan has been updated twice and expanded into its current four volume set. The Massachusetts Nonpoint Source Program has likewise seen many changes over the years and is now fully integrated into the Massachusetts Watershed Initiative.

This first volume of the Management Plan lays out all of the salient features of the Management Plan with an eye on its actual implementation through the State's NPS Program. An example of this is the following section titled "Regional Coordination and the NPS Action strategy." Another example is contained in Section V – "Short and Long-Term Strategies" which lists the implementation strategies for the State's 319 NPS Program and the Coastal 6217 NPS Program.

The NPS Management Plan in its entirety is a rather large and complex piece of work. This volume, the Strategic Summary, hopefully sorts out the major tenets of the plan while maintaining a focused perspective on its implementation through the state-wide NPS Program

II. REGIONAL COORDINATION AND THE NPS ACTION STRATEGY

In the new millennium the NPS Program established a regional approach to fully integrate nonpoint source pollution implementation strategies into the Massachusetts Watershed Initiative (MWI). Four new positions were established with approval and strong support from the Environmental Protection Agency (EPA). These new positions were established within the four Department of Environmental Protection (DEP) regions with the general mandate to implement NPS strategies to improve water quality. In order to achieve this mandate, the four regional NPS coordinators were assigned the following major tasks:

Objectives

- Assist teams, municipalities or other project proponents to identify and prioritize nonpoint source projects for implementation. Use TMDL's, 303d list, assessment reports, etc., as a guide to determine project need.
- Assist EOEAs to implement TMDL recommendations related to NPS initiatives.
- Assist any 319 project proponent to develop and submit high quality project proposals.
- Provide technical assistance and training to Watershed Teams, local officials and local groups on BMPs for NPS pollution.
- Provide technical assistance to DEP and EOEAs on Nonpoint Source related issues.
- Serve as regional NPS program primary point of contact and assist regional staff to develop and track priority projects.

In order to fully effectuate the tasks assigned to the regional coordinators it became necessary to identify the extent of water quality impairments on a watershed basis. In response to this challenge a NPS Action Strategy will be developed for each of the major 27 watersheds. The NPS Action Strategy describes each watershed segment by segment, gives the cause and source (when known) of impairment, and lists the recommended NPS actions needed to correct the problems. Each NPS Action Strategy is culled from all available assessment reports, diagnostic reports, MWI Team reports, watershed reports, and any other available land-use or water quality documents. Only the essential action oriented information is presented so that the regional coordinators, working with the MWI Teams or any other interested entity, can focus their efforts and resources on priority implementation strategies.

A prototype effort was undertaken for the Hudson Basin NPS Action Strategy and, by way of illustration, the first page is reproduced:

**DRAFT
NPS ACTION STRATEGY
HUDSON BASIN**

Hoosic River Sub-basin River Segment Assessments

Waterbody	Segment	Miles	303d	Impairment	Other Issues
Hoosic River	MA 11-03	8.9	Y	Pathogens	Low Do, Ph, Algae, Toxicity

Recommended NPS Action	Source
Conduct additional monitoring for DO, pH, algae, turbidity, nutrients, bacteria, fish, aq. macroinvertebrates	DEP '97*
Complete stormwater assessment for Adams center	BRPC '98
Implement BMP's for erosion control at Rough Road/Alger St. and Cheshire St./Notch Road in Adams	BRPC '98
Evaluate potential impacts from Speciality Minerals landfill	BRPC '98
Implement BMP's for roadway erosion impacting an "Unnamed" stream near Specialty Minerals in Adams	BRPC '98
Assess potential impacts from (2) farm properties along Spring Road & East Road in Adams	BRPC '98

Waterbody	Segment	Miles	303d	Impairment	Other Issues
Hoosic River	MA 11-04	4.3	Y	Pathogens	Potential chlorine toxicity from Adams WWTP Potential PCB contamination in sediments Habitat alteration from concrete stream channel

Recommended NPS Action	Source
Conduct monitoring for turbidity, bacteria, aquatic macroinvertebrates, temp., habitat assessment and PCB's	DEP '97
Remove auto debris from Hoosic River and bank near Hunter Foundry Bridge	DEP '97
Evaluate the impact of (2) auto salvage yards along Ashland St. (east of the river) in N. Adams	BRPC '98
Confirm that the cleanup at the abandoned old Widen Tannery in N. Adams is in compliance with MCP	BRPC '98
Relocate N. Adams snow dumping site	BRPC '98

Waterbody	Segment	Miles	303d	Impairment	Other Issues
Hoosic River-N. Branch	MA 11-01	4.1	Y	Pathogens, Siltation	Potential DO, Temp., turbidity, nutrients (total)

Recommended NPS Action	Source
Conduct monitoring for DO, temp. ,turbidity, nutrients (total) pH, bacteria,aquatic macro,habitat assessment	DEP '97
Conduct Stormwater sampling for bacteria and total suspended solids	DEP '97
Evaluate the effectiveness of stormwater BMP's for Krutiak Wood Products in Clarksburg	BRPC '98
Determine the repair status of suspected failing Title 5 systems in Brook Heights section in Clarksburg	BRPC '98
Identify source: "milky" substance leaking from the Hoosic banks(through downtown, past old mill)in Clarksburg	BRPC '98

The Action Strategy indicates the 303(d) status of each segment and waterbody which is important because any 303(d) waterbody is given priority for implementation purposes.

As mentioned earlier, the NPS regional coordinators are working to integrate the nonpoint source program into the Massachusetts Watershed Initiative (MWI) to obtain truly meaningful results. A brief overview of the MWI is in order at this point.

*DEP '97- DEP, Division of Watershed Management, Hudson River Basin 1997 Water Quality Assessment.
BRPC '98 – Berkshire Regional Planning Commission, Assessment of Land-Use Activities and Nonpoint Source Pollution in the Hoosic River Watershed.

III. MASSACHUSETTS WATERSHED INITIATIVE

A. General Description

The Massachusetts Watershed Initiative is both a structure and process for implementing the watershed approach. The methodology is intended to be a dynamic framework which can be adapted to meet the unique opportunities and conditions in each watershed.

The key features of the Watershed Management Methodology, essential for successful implementation of the watershed approach, are:

- The co-leadership roles of the state, watershed associations or other citizen groups, the business community, and municipalities in implementing the watershed approach.
- Twenty-seven interdisciplinary watershed teams who are managed by 20 full-time team leaders.
- Community-based outreach, resource assessment, planning and implementation involving all stakeholders.
- The sub-watershed focus of problem identification and Watershed Action Plan development.
- The goal of targeting allocation of limited dollars to watershed priorities, so they are used where we can achieve the most environmental protection for the dollars available.
- The assumption that all watersheds are equally important. The key to effectively protecting our environment and to a watershed approach is local action and empowering local people to protect their local resources. This type of empowerment is happening in all our watersheds.
- Integrating local, state and federal environmental programs on a watershed basis, using the watershed workplans as the vehicle for integrating specific activities in a specific year.

Public Participation and Oversight

The **Watershed Initiative Steering Committee (WISC)** developed the Watershed Management Methodology. The WISC is an advisory committee, which provides advice and guidance to the Secretary of Environmental Affairs. It consists of approximately 30 members (appointed by the Secretary) representing a full range of community partners, including the environmental community, watershed associations, businesses, business organizations, regional planning agencies, municipal governments, scientists, educators, and citizens. The responsibilities of the WISC include:

- Providing on-going program development advice and guidance.
- Evaluating state agency and watershed level implementation progress.
- Identifying financial and technical resources for groups working in watersheds.
- Measuring progress and success, and reporting on this progress and success to the Secretary and the Massachusetts Watershed Coalition (the statewide association of watershed groups).
- Assessing proposals from watersheds for assistance in implementing watershed management.
- Ensuring that Watershed Action Plans satisfy established criteria for content, stakeholder involvement, and public review.

Integration of Watershed Management Resource Programs

The Watershed Initiative is structured to coordinate various state agencies and programs to work with local community partners to develop a comprehensive watershed approach based on the specific needs and issues in each of the 27 major watersheds in the State. The structure and process outlined below encompasses a comprehensive planning approach that included outreach, research, assessment, planning, implementation and evaluation. These watershed plans have the potential to address the full range of watershed issues, including water supply planning, water quality restoration and

protection, wetland restoration, open space planning, habitat protection and enhancement and regulatory activities. The key for state agencies is to have the program be comprised of the core environmental programs of the agencies, rather than be a program that is outside of these agencies' core activities. The goal is to find more effective ways for agencies to accomplish their core activities while incorporating and addressing stakeholder concerns. To date, the Initiative has succeeded in prioritizing and directing limited state resources to provide services in ways that meet the needs of the state's 27 watersheds.

The Structure: EOEa Watershed Teams, representing state and federal agencies and community partners, form the basis of the state's watershed protection efforts by providing a direct watershed-specific link for community participation. The Teams perform watershed-wide water quality and habitat assessments and work in concert with local Stream Teams in their data and information gathering effort. The Watershed Teams also assist watersheds in overall planning and implementation through the development of Annual Work Plans and Five-Year Watershed Action Plans. The Team is equally accountable to the Secretary of Environmental Affairs and to the community for the plans as well as the products and deliverables identified in the plan.

The Watershed Management Methodology involves, in some cases, the creation of **Watershed Community Councils** in each of the state's watersheds. Councils are composed of watershed partners who coordinate with teams to implement the watershed approach through identifying priority issues and developing and implementing Watershed Action Plans. The Watershed Community Council is representative of all interests in the watersheds including municipalities, businesses, landowners, citizen groups, and recreational users. The Watershed Community Councils also include representatives of state and federal agencies which have programs or activities in the watersheds.

In each Watershed, an organization or group, the Watershed Convener, assists a watershed in the formation of the Watershed Community Council. The convener is often the local watershed association. Conveners are existing organizations working in the watershed and are self-selected. They are generally supported by the various partners in the watershed. Examples of potential conveners in addition to watershed associations are business councils, regional planning agencies, or other groups or partnerships serving the watershed with proven capability to support the Watershed Community Council and the planning process.

In addition to the Watershed Community Councils, Stream Teams, groups organized at the sub-watershed level, assess the quality of the local environment (through water quality monitoring and shoreline surveys of river or stream segments), identify local problems, and recommend solutions. Stream Teams include in their membership municipal government and business representatives who contribute to the assessment of problems and development of solutions. Information and recommendations are compiled by Stream Teams in Sub-watershed Action Plans for integration into the overall Watershed Action Plan. Stream Teams receive support and assistance through the Watershed Community Councils and technical assistance is provided to them by the Riverways Program.

Sound and consistent science and technology is needed to support watershed activities. Consistent technical assistance and standards and protocols must be available to agencies, watershed teams, and community partners. To make sound environmental decisions, regional GIS Service Centers have been developed. They are expected to provide practical technical assistance and training to volunteer monitors working in the watersheds. In addition private consultants and academics have expressed interest in developing a partnership among government, business, watershed, and academic interests to share data and coordinate technical services as a public/private partnership.

An interagency Roundtable has been established to coordinate resource allocation and set priorities for the EOEa agencies. It consists of senior EOEa agency managers. Roundtable members review annual work plans and comprehensive five-year watershed action plans developed by each watershed team leader. The Roundtable is expected to resolve resource allocation issues and ensure that subsequent decisions facilitate implementation of work plans. They work to ensure consistency of services and reconcile competing demands for resources. Finally, the Roundtable is expected to resolve deadlocked issues of resource allocation and ensure that subsequent decisions facilitate implementation of work plans. Community partners are represented through three seats on the Roundtable filled from the WISC Executive Committee so that community partners contribute to the development and implementation of work plans. Annual Work Plans and Watershed Action Plans are linked to the legislative and agency budgeting cycle.

The Key Operational Elements Include:

- Each of the 27 watersheds has a watershed team led by one of 20 full-time team leaders. These team leaders work for the Executive Office of Environmental Affairs so that they serve as true interagency leaders to avoid turf barriers by being associated with one agency.
- The team leaders are managed by a high level watershed manager. The watershed manager not only manages the leaders, but has direct-interaction with the Commissioners of each agency and with the Secretary of Environmental Affairs to ensure support from the top.
- The Roundtable is the key mechanism to ensure that agencies are allocating their resources, both people and money, according to the priority issues and actions identified by the teams.
- These elements are structured so that the teams, through the team leaders and the manager, have direct access to the Secretary and the Commissioners. Resource needs are communicated and addressed directly, by-passing the many layers of bureaucracy that stand between front line staff, communities, and the ultimate decision makers.
- Once resource allocations are recommended by the Commissioners and approved by the Secretary, they are implemented through the normal chain of command. In this way, all of the middle managers and front-line supervisors are responsible for seeing to it that these commitments are met. The watershed activities are part of their job descriptions, not outside of it.
- The five year and annual work plans developed by the teams serve as the "contracts" among the partners that allow the various work tasks to get done and allow the normal chain of command within the state agencies to implement the team priorities and actions.

The Process: The Watershed Initiative is based on a Five Year Planning Cycle that is designed to collect and share watershed resource information, assess impacts to water resources, and develop and implement activities to protect and improve them. Each year builds on previous years. Massachusetts' watersheds are in different years/phases of their planning cycle so that adequate state resources are available for each watershed. The phased five year cyclical program consists of: (See also Figure 1)

YEAR/PHASE ONE: INITIAL OUTREACH

Determine what information is available, what is needed to make informed decisions, and how it is obtained. Conduct outreach to gain community involvement, learn concerns and begin to develop priorities for action.

YEAR/PHASE TWO: RESEARCH

Fill in information gaps; conduct monitoring, review information, including input from watershed interests. Continue outreach to increase community involvement.

YEAR/PHASE THREE: ASSESSMENT

Assess current conditions and uses, determine causes and sources of impairment; develop solutions to immediate problems. Review data together with watershed interests, set priorities, provide grant information.

YEAR/PHASE FOUR: PLANNING AND IMPLEMENTATION

Develop and implement solutions, solicit grant proposals, prepare plans to mitigate watershed problems; provide technical support. Include watershed interests in all facets of planning and implementation.

FIGURE I – Colored Watershed Cycle Map

YEAR/PHASE FIVE: IMPLEMENTATION AND EVALUATION

Evaluate Watershed Team activities; update information, make changes for next cycle, continue implementation together with watershed interests.

Annual Work Plans are developed by each watershed team and serve as a guide for coordinating team work efforts of a given year. They are the building blocks of the Five Year Watershed Action Plan and provide the basis of resource requests to the Roundtable.

Each annual work plan is organized by the Watershed Initiative's goals (outreach and education, local capacity building, water quality, water quantity, habitat, open space, and recreation). The work plan lists tasks for team members (both agency and non-agency), identifies the cost of implementation (e.g., funding, personnel costs/time commitment), and contains a proposed schedule of activities for the period of the work plan.

Five Year Watershed Action Plans serve as dynamic guidance documents that outline strategies to mitigate watershed problems and protect resources. Most of the partners in the watershed process bring their action items to the plan. The Watershed Action Plans provide the framework for cooperative efforts to protect and restore the natural resources of the watershed. They describe and prioritize environmental problems in the watershed, describe sources of funding and technical assistance, make recommendations for regulatory and non-regulatory actions and specify a funding plan and schedule for completing actions. Most importantly, Watershed Action Plans identify and recommend roles and responsibilities for implementing the actions among the various stakeholders, within and outside the watershed, and designate lead persons or organizations. The plans are submitted to federal, state, and local agencies to guide their decision making and allocation of funds and technical assistance.

For the readers convenience, a list of the 27 EOEa Watershed Team leaders follows with contacts for the Watershed Initiative.

WATERSHED TEAM LEADER CONTACT LIST (As of August 4, 2000)

Robert O'Connor, Director
Watershed and Land Policy
251 Causeway Street, 9th Floor
Boston, MA 02114
Phone: (617) 626-1170
Fax: (617) 626-1181

Karl Honkonen
Watershed Manager
21 Causeway Street, 9th Floor
Boston, MA 02114
Phone: (617) 626-1138
Fax: (617) 626-1181

Watershed	Leader	Address	Telephone #/Fax #
Boston Harbor/Mystic	Kwabena Kyei-Aboagye Acting Team Leader	Executive Office of Environmental Affairs 21 Causeway Street, 9 th Floor Boston, MA 02114 Kwabena.Kyei-Aboagye@state.ma.us	(617) 626-1165 (617) 626-1181
Blackstone	Lynne Welsh	180 Beaman Street West Boylston, MA 01583 Lynne.Welsh@state.ma.us	(508) 835-4816 x 503 (508) 835-6018
Buzzards Bay	David Janik	20 Riverside Drive Lakeville, MA 02345 David.Janik@state.ma.us	(508) 946-8990

**WATERSHED TEAM LEADER CONTACT LIST
(Continued)**

Watershed	Leader	Address	Telephone #/Fax #
Cape Cod	Patti Kellogg	P.O. Box 3092 Waquoit, MA 02536 Patti.Kellogg@state.ma.us	(508)457-0648 (617) 727-5537
Charles	Peter Phippen	Executive Office of Environmental Affairs 21 Causeway Street, 9 th Floor Boston, MA 02114 Peter.Phippen@state.ma.us	(617) 626-1174 (617) 626-1181
Chicopee	Paul Lyons	P.O. Box 628 Belchertown, MA 01007 Paul.Lyons@state.ma.us	(413) 323-8998
Connecticut	John O'Leary	c/o NRCS 243 King Street, Rm. 39 Northampton, MA 01060 John.OLeary@state.ma.us	(413) 587-9329 (413) 586-8648
Deerfield	Christine Duerring	55 Federal Street Hayburn Building, Rm. 290 Greenfield, MA 01301 Christine.Duerring@state.ma.us	(413) 773-7899 (413) 774-4949
Farmington	Michael Parker	Hampton Ponds State Park 1048 North Road Westfield, MA 01085 Michael.Parker@state.ma.us	(413) 532-4450 (413) 533-1837
French	John Desmond	627 Main Street Worcester, MA 01608 John.Desmond-EQE@state.ma.us	(508) 767-2787 (508) 792-7621
Housatonic	Thomas O'Brien	78 Center Street Federal Building, Rm. 206 Pittsfield, MA 01201 Tom.OBrien@state.ma.us	(413) 447-9771 (413) 499-4169
Hudson	Thomas O'Brien	78 Center Street Federal Building, Rm. 206 Pittsfield, MA 01201 Tom.OBrien@state.ma.us	(413) 447-9771 (413) 499-4169
Ipswich	Richard Tomczyk	205A Lowell Street Wilmington, MA 01887 Richard.Tomczyk@state.ma.us	(978) 661-7817 (978) 661-7615
Island (Martha's Vineyard & Nantucket)	Patti Kellogg	P.O. Box 3092 Waquoit, MA 02536 Patti.Kellogg@state.ma.us	(508) 457-0648 (617) 727-5537
Merrimack	William Dunn	627 Main Street, 2 nd Floor Worcester, MA 01608 William.Dunn@state.ma.us	(508) 767-2799 (508) 791-4131
Millers	Alice Rojko	627 Main Street, 2 nd Floor Worcester, MA 01608 Alice.Rojko@state.ma.us	(508) 767-2855 (508) 791-4131
Mr. Hope/Narragansett	Andrea Langhauser	20 Riverside Drive Lakeville, MA 02347 Andrea.Langhauser@state.ma.us	(508) 946-2878 (508) 947-6557

WATERSHED TEAM LEADER CONTACT LIST
(Continued)

Watershed	Leader	Address	Telephone #/Fax #
Nashua	Jo Anne Carr	180 Beaman Street West Boylston, MA 01583 Jonne.Carr@state.ma.us	(508) 835-4816 x 501 (508) 835-6018
North Coastal	Larry Gil	205A Lowell Street Wilmington, MA 01887 Lawrence.Gil@state.ma.us	(978) 661-7746 (978) 661-7615
Parker	Richard Tomczyk	205A Lowell Street Wilmington, MA 01887 Richard.Tomczyk@state.ma.us	(978) 661-7817 (978) 661-7615
Quinebaug	John Desmond	627 Main Street Worcester, MA 01608 John.Desmond-EQE@state.ma.us	(508) 767-2787 (508) 792-7621
South Coastal	George Zoto	20 Riverside Drive Lakeville, MA 02347 George.Zoto@state.ma.us	(508) 946-2739 (508) 947-6557
SuAsCo	Mike Fleming	P.O. Box 155 Clinton, MA 01510 Mike.Fleming@state.ma.us	(508) 835-4816 x 502 (508) 835-6018
Shawsheen	William Dunn	627 Main Street, 2 nd Floor Worcester, MA 01608 William.Dunn@state.ma.us	(508) 767-2799 (508) 791-4131
Taunton	Patrick Rogers	20 Riverside Drive Lakeville, MA 02347 Patrick.Rogers@state.ma.us	(508) 946-2836 (508) 947-6557
Ten Mile	Andrea Langhauser	20 Riverside Drive Lakeville, MA 02347 Andrea.Langhauser@state.ma.us	(508) 946-2878 (508) 947-6557
Westfield	Michael Parker	Hampton Ponds State Park 1048 North Road Westfield, MA 01085 Michael.Parker@state.ma.us	(413) 532-4450 (413) 533-1837

MWI POLICY STAFF

NAME	ADDRESS	PHONE #/FAX #
Ole Amundsen	251 Causeway Street, 9 th Floor Boston, MA 02114	(617) 626-1178 (617) 626-1180
John Clarkson	251 Causeway Street, 9 th Floor Boston, MA 02114	(617) 626-1175 (617) 626-1180
Melissa Cryan	251 Causeway Street, 9 th Floor Boston, MA 02114	(617) 626-1171 (617) 626-1180
Don Fraser	251 Causeway Street, 9 th Floor Boston, MA 02114	(617) 626-1176 (617) 626-1180
Ryan McGorty	251 Causeway Street, 9 th Floor Boston, MA 02114	(617) 626-1148 (617) 626-1180

Integrating Existing Environmental Programs Into the Structure and Process

Each agency and program continues to work to ensure that it is integrated with the Watershed Approach.

Some examples include:

- DEP Reorganization - in 1996 DEP underwent a major reorganization to build its structure on a watershed approach. Key features of the reorganization include delegating key environmental decisions to regional offices with better understanding of watershed issues and organization of regional offices into watershed units consisting of members of multiple program staff.
- State revolving loan funds - to get on our intended use plan, the largest number of points in the ranking system is consistency with a state watershed plan. Additional points are also awarded to projects that address 303(d) listed waters. In addition, the SRF eligibility has been broadened to include non-point source pollution so that the funds are available to address a wider variety of watershed issues. In 1997 the fund provided \$207 million in 0% loans.
- State grant programs - all water related grant programs include ranking criteria for the consistency of the proposal with watershed plans or team activities. Therefore, 319, 604(b), growth planning, CZM, land acquisition and other programs award funds based on watershed priorities.
- State regulatory programs - NPDES, water withdrawal, groundwater discharge permits - all are reviewed and reissued if appropriate during the year four of the watershed cycle and allows for comprehensive evaluation and decision-making.
- Rivers Protection Act - An act passed in 1996 that establishes strict performance standards for all activities that occur within 200 feet of rivers and streams. The passage of this act was due in part to the concerted efforts of watershed advocates.
- TMDL - Total Maximum Daily Load (TMDL) analysis needs are prioritized in consultation with the watershed teams. Teams assist with the data development process and review and comment on TMDL results. Finally, teams are asked to assist in the development of implementation activities needed to have waterbodies meet state water quality standards. Teams then apply for funding or provide funding through the Watershed initiative to implement TMDL recommendations.
- Environmental assessments – water quality assessments are developed during year three of the cycle. The watershed teams, including local stakeholders, provide data and information during that process to supplement state data collection activities. By doing so local interests and information are merged with the state assessment process and strengthens our knowledge and assessment process.
- Monitoring and field work – to the extent possible state and Non-Government Organization (NGO) personnel field activities are coordinated which avoids duplication of effort.
- Cross-media inspections and hazardous waste site audits are being integrated into the five year basin cycle and are being driven by watershed priorities.

STATE PROGRAMS TO FOSTER THE ESTABLISHMENT OF GRASSROOTS AND WATERSHED BASED STEWARDSHIP ORGANIZATIONS

The Commonwealth of Massachusetts provides financial and other support to build local grassroots organizations that are focused on watershed protection issues. Each of the 27 watersheds have one or more groups currently dedicated to these issues, though they encompass a wide range of abilities.

Massachusetts Watershed Initiative Grant Program

Funding for the Massachusetts Watershed Initiative has been provided under the Open Space Bond fund. These funds have been used to develop two grant programs to support watershed organizations to participate in the Watershed Initiative.

Watershed Stewardship Program

Under the Capacity Building Grant the Executive Office of Environmental Affairs (EOEA) enters into contracts with organizations capable of working with EOEA- Watershed Teams and with watershed organizations that will work to create and implement a watershed action plan. The objective is to strengthen the long term capability of these organizations to participate in resource protection, help engage a diverse group of stakeholders, and work with EOEA Watershed Teams. The program is aimed primarily at building sustainable organizations by funding start-up operational expenses.

Communities Connected by Water Planning Grants

The Massachusetts Executive Office of Environmental Affairs (EOEA) enters into contracts for the development of a plan dedicated to effective growth planning integrated with comprehensive natural resource protection. This offering is made in two components. Part 1 is directed toward watershed associations, civic organizations, or other similar entities which meet the eligibility requirements enunciated below. Part 2 is directed toward municipal government, or a collaboration of neighboring municipal governments, or a regional planning agency, or similar government body.

Development of this plan is to be coordinated, assuring consistent objectives, and accepted by a broad cross section of watershed stakeholders. In conjunction with the development of these plans, respondents should include projects to:

- Identify and prioritize priority pollution sources;
- Organize the watershed community or segment thereof in support of implementation of recommendations;
- Create a formal procedure for watershed stakeholders to maintain open communications both with each other as well as the various government agencies supporting resource and growth planning efforts;
- Utilize the above procedure to tracking progress on the implementation of the recommendations put forward for resource protection and growth planning.

Other EOEA Programs that Support Grassroots and Watershed Organizations

Department of Fisheries and Wildlife Riverways Program - promotes the restoration and protection of the ecological integrity of watersheds. The program is designed to encourage and support local river protection initiatives. They accomplish this through:

- Providing technical assistance and outreach to communities, citizen groups and others;
- Assisting watershed organizations in developing “adopt-a-stream,” fish-way stewardship teams and other citizen initiatives;

- Preparing and distributing newsletters, brochures and "how to" publications;
- Conducting training sessions on conservation tools and action plan formulation;
- Disseminating notices of permit reviews and other pending government actions to citizen groups and providing guidance on how to participate in government decision making;
- Assisting communities in drafting river protection bylaws and ordinances;
- Formulating and promoting statewide policies and legislation on river protection;
- Negotiating donation of land and conservation restrictions;
- Providing grants to municipalities, regional planning authorities and watershed associations to improve public access to and along rivers;
- Helping communities clean up blighted urban riverbanks through the Massachusetts Urban Rivers Action Program;

EOEA Volunteer Monitoring Program - For FY 1998-2000 the legislature funded the EOEA proposal to develop a grant program for volunteer monitoring activities. The program provides small grants to volunteer monitoring groups and supports a state-wide network of technical assistance providers. The goal of the program is to have an active group of volunteer monitors statewide and to ensure volunteer monitoring data is included in state and federal watershed assessment reports.

Massachusetts Watershed Coalition - The Watershed Coalition is a non-governmental organization that assists watershed organizations to build their organization capacity to act as advocates for watershed protection. Programs include training in strategic planning, board and membership development, environmental planning and protection. Though not a state program, the Coalition plays a key role in building grassroots organizations.

Massachusetts Environmental Trust - Using funds raised through special conservation automobile license plates, the Trust is an environmental, philanthropic organization that provides grants to grassroots, non-governmental organizations to raise awareness and protection of state waterways. The Trust has recently implemented a New Alliances grant program that aims to build alliances among groups that do not traditionally work together on solving environmental problems.

CONCLUSION

Together these programs provide substantial direct support to grassroots environmental organizations. In addition, the Watershed Team and Community Council provide a forum in which environmental organizations can participate in watershed planning and decision-making with state, federal, and local government.

B. Implementation

The watershed Teams focus on an innovative five-year management process that is designed to collect and share resources and information, target present and potential impacts to natural resources, assess impacts to natural resources, and develop and implement activities to protect and improve the Commonwealth's natural resources. Each year builds on the work of the previous year. Annual Work Plans are developed with active team involvement and serve as a guide for coordinating team efforts. Plans are the building blocks of the more comprehensive Five-Year Watershed Action Plan. Action Plans influence state and federal grants and loans, regulatory decision-making, and education/technical assistance programs to solve the most important environmental problems affecting communities.

The following examples illustrate how the Initiative coordinates state agency, town, and watershed association planning efforts and focuses them on top priority areas within each watershed. The Watershed Team partners with local organizations and citizens, set concrete and achievable Environmental Targets for each watershed. State revolving funds and grants, federal and private resources, and existing state and local resources are focused on achieving desirable environmental outcome.

- ❖ The Ipswich Watershed Team is designing water management strategies to solve the low flow problem that has made the Ipswich River one of the most endangered rivers in the nation. This study will determine the levels of flow needed to sustain aquatic life and will be a model for many rivers in the state.
- ❖ The French/Quinebaug Watershed Team and the DEM Office of Dam Safety are evaluating all the dams in their watershed to determine their hazard rating and identify those most in need of repair. They are also analyzing other issues associated with these dams including flooding, wetlands, fish habitats, hazardous sediment deposits, private/public wells, and beaches. This study will help to create a model that can be used to reduce impacts from other dams across Massachusetts.
- ❖ The Hoosic Watershed Team, in partnership with the Regional Planning Agency, is implementing a watershed-wide education program to teach municipal officials about polluted runoff and how to avoid future problems. The program will help communities develop local by-laws, which can be shared with cities and towns in other watersheds.
- ❖ The Westfield, Farmington and Housatonic Teams, working with the Regional Planning Agency, have created a regional lakes and ponds organization to pool the resources of local lakes associations so that the best techniques for protecting and restoring lakes are understood and available.
- ❖ In the Shawsheen Watershed, a grass roots organization received an Initiative Grant to create a watershed association. They have created a strong organization that brings communities together to improve conditions in the watershed. The Association has monitored water quality, mapped storm drains, located pollution "hot spots," organized river clean-ups and helped towns' complete open space plans.
- ❖ Local Sudbury-Assabet-Concord organizations received an Initiative Grant to form the SuAsCo Watershed Community Council. This Council provides a forum for community partners to coordinate their efforts and solve problems affecting cities and towns in eastern Massachusetts. Stream teams have been formed across the watershed and they organized workshops for municipal officials on pollution reduction.
- ❖ The Middlesex Conservation District and the Organization for the Assabet River, in cooperation with the SuAsCo Watershed Team, and SuAsCo Community Council, have sponsored a series of workshops for municipalities and businesses on controlling costly phosphorus pollution to the Assabet River. In addition, the watershed team has provided funding to collect data for TMDL development and six towns have joined to evaluate their long-term wastewater management needs and options. The DEP SRF program provided \$3.5 million for this effort.
- ❖ The Taunton River, French/Quinebaug, and Cape Cod Watershed Teams are partnering with the Cape Cod Commission, University of Massachusetts, and local communities to identify and map sensitive watershed and habitat resources using computer mapping so that limited resources can be focused on the most critical resources.
- ❖ The South Coastal Watershed Team is providing technical assistance to their towns by completing a stream-mapping project. During the winter and spring months the South Coastal watershed supplies water from snowmelt and

rainwater to brooks and streams. During the summer and fall seasons the upper reaches of small waterways dry up and they are difficult to see. By mapping these tributaries local Conservation Commissions can protect them from the impacts of development.

- ❖ The Ten Mile River Watershed Team is working with the Regional Planning Agency, municipal officials, and planning staff in six communities to develop a regional approach to open space protection. These plans identify critical land parcels to protect so limited resources and land-use protection efforts can be focused on the most sensitive resources in the region. This approach will be applied in eight other watersheds beginning in the fall of 1999.

- ❖ The North Coastal Watershed Team is partnering with the Coastal Zone Management agency, the Regional Planning Agency and the diverse groups from several North Coastal communities to find an appropriate method to implement conservation zoning. The method will help to protect sensitive resources and focus appropriate development on less sensitive areas.

- ❖ The Initiative, working with the Wetlands Restoration and Banking Program, EPA, and the Gillette Corporation has launched a statewide "Corporate Wetlands Restoration Partnership" which focuses corporate donations to restoring priority wetlands across the state. Thus far, more than a dozen companies have pledged to donate money and staff to restoring the wetlands.

- ❖ The Island Watershed Team is working with four state and federal agencies, and the Town of Nantucket to study the water quality in Nantucket Harbor and its relationship to the declining scallop industry. They will evaluate habitat degradation, stormwater pollution, and spawning losses.

- ❖ The Blackstone Headwaters Coalition, using federal funds, is working to restore a stream that now exists only in an underground pipe. They are exploring strategies for stream and wetland restoration, and remediation of pollution problems, along a 3,500 foot collapsed culvert portion of Beaver Brook, in conjunction with the City of Worcester DPW and U.S. Army Corps of Engineers.

- ❖ The Boston Harbor Watershed Team is coordinating with the Massachusetts Department of Environmental Protection, U.S. Environmental Protection Agency, Neponset River Watershed Association, United States Geological Survey, and the Town of Hingham to complete an analysis of the impacts of reduced streamflow on aquatic species in the Weir and Neponset River watersheds. This project will develop a practical rapid assessment methodology for determining minimum acceptable flow conditions based on watershed conditions such as fish and macroinvertebrate habitat requirements and the needs of the wetlands.

- ❖ The Connecticut, Parker, Ipswich, and Deerfield teams are working with Conservation Districts and the Department of Food and Agriculture to implement livestock fencing projects to reduce agricultural pollution in these rivers. They are working to help farmers reduce animal waste in streams and prevent erosion of stream banks. Workshops for farmers will be held and tours will be led to demonstration farms.

- ❖ The Worcester County Conservation district is working with the Nashua and Chicopee Watershed Teams, the Metropolitan District Commission, EPA, and the City of Worcester to teach forest and farm landowners how to improve stewardship of their land. They are providing information on available technical and financial assistance that can help them prevent pollution of public water supplies.

- ❖ The Charles River Team is coordinating with EPA, MDC, USGS, and MWRA to finance a study to determine the contribution of stormwater and combined sewer overflow pollution in the Charles River. This will help focus restoration dollars to where they will help most.

- ❖ The Millers Team is coordinating with the Army Corp of Engineers, U.S. Geological Survey, and DEP to identify the sources of PCB contamination in the Tully River. This complex project requires close coordination between the agencies, the watershed council, and the local communities.

- ❖ In July 1998, President Clinton designated the Connecticut River as an American Heritage River. The Connecticut Watershed Council and the Regional Planning Agency Team collaborated with the other team members and the four neighboring states to prepare the application for the federal government. This designation will enable greater federal and state assistance to improve the Connecticut River.
- ❖ The Boston Harbor Watershed Team, Department of Fisheries, Wildlife, and Environmental Law Enforcement, and the Army Corps of Engineers are working on a project to open fish passage at two dams on the lower Neponset River. The dams are a major barrier to anadromous fish and block access to twenty river miles of prime fish habitat. This project will study the problem at the watershed scale, make recommendations for a phased solution, and implement fish passage projects at both dams.
- ❖ Massachusetts received an additional \$1.3 million in federal funds to solve pollution problems as a result of the Watershed Initiative. Team priorities will help guide the expenditures of these funds. The Federal Clean Water Action Plan program encourages states to adopt grassroots approaches to solving pollution, of which the Initiative is a national model.
- ❖ The Buzzards Bay team, in its outreach year, is supporting the expansion of the Westport River Watershed Association, the launching of a broad-based school education program, and the expansion of the Regional Community Congress to include broader environmental issues.
- ❖ The Boston Harbor Team, in the research year, is coordinating water quality, flow, and habitat studies with state, federal, and private expertise so that solutions can be focused on the highest priority sites.
- ❖ The French/Quinebaug Team, in its outreach year, is working with the Heritage Commission, University of Massachusetts, Nichols College, and the local Regional Planning Agency to involve communities in solving local problems so that protection and restoration efforts will gain broad-based support.
- ❖ The Housatonic River Restoration, Inc. has developed a restoration plan for the river, following the government's negotiated settlement with General Electric Company. HRR, Inc. is a broad-based coalition of environmental, conservation, and political entities from throughout the watershed, representing a united public voice. Restoration planning has included 18 public hearings with 500 persons from Pittsfield and neighboring towns. The goal of HRR, Inc. and the Watershed Team is a fishable, swimmable river through its participation in effective application of Natural Resource Damage of the GE settlement funds.
- ❖ Forums to involve the general public have been held in the Westfield, SuAsCo, French/Quinebaug, Connecticut, Nashua, Taunton, and Merrimack watersheds. These events have involved hundreds of participants and allow time for people to give their ideas on how to better protect and restore valuable watershed resources.

IV. TOTAL MAXIMUM DAILY LOAD STRATEGY

In the earlier section describing the regional NPS coordinators it was pointed out that 303(d) waters were given priority for implementation purposes. The reason for this, of course, is that the state has initiated its TMDL Program for improving the impaired (303(d)) waterbodies.

A clear understanding of the causes of impairment is a critical element in the success of efforts to improve water quality conditions and restore designated uses to the waterbody. Development of TMDLs will be scheduled based, in part, upon the availability of data identifying the causes of non-attainment and the severity of the existing water quality problem.

The State of Massachusetts is committed to developing TMDLs for all impaired water bodies where TMDLs are needed by the year 2012. To achieve this goal, the DEP must effectively allocate resources and rely on all watershed stakeholders to work in partnership. As previously noted, public input and feedback on setting priorities within each watershed as well as on proposed strategies and implementation measures to address water quality impairments is a

central component of the State's approach to meeting its commitments of the Clean Water Act over the next decade. Given this, the Department is proposing to utilize the watershed teams to the maximum extent feasible during the 5 year watershed cycle to help prioritize listed waters for TMDL development. Prioritization will be based upon the relative importance of each water body within the watershed, the constituent of concern causing impairment, and the degree to which analytical methods are defined, accepted, and available to achieve problem resolution. Also taken into account is the degree the use is impaired and the degree to which there exists local commitment toward implementation efforts. The attached spreadsheet (attachment No. 1) provides an estimate of the percentage of TMDLs which must be developed by DEP for each watershed between the year 2000 and 2012 in accordance with the basin cycle. The schedule was developed in recognition that there are two distinct categories of pollutants, those in which DEP believes technical methods are well established for TMDL development (category A) and those which the methods are not well established and which will require further development (category B). A list of pollutants in each of these categories is provided in attachment No. 2. It can be seen when reviewing the spreadsheet that DEP is currently proposing, during the first round of the watershed cycle, to develop a large number of TMDLs for which known analytical protocols are established. Also during the initial years DEP plans to work cooperatively with EPA to establish acceptable methods for conducting TMDLs for those parameters where acceptable methods either currently do not exist or may be questionable. Once acceptable methods are identified and agreed upon with EPA those TMDLs will be developed during the second 5 year watershed cycle.

It should also be noted that as draft TMDLs are developed DEP plans to utilize the watershed teams to obtain stakeholder input on proposed implementation strategies for each TMDL and incorporation of those strategies into the overall watershed management plan for implementation.

The Department's proposed strategy during the initial years is intended to accomplish three primary objectives. First, it builds upon current information and studies previously conducted which qualify for submittal as a TMDL and therefore concentrates on implementation of corrective measures wherever feasible. Second, it includes a pilot program in one watershed to better define data collection needs and TMDL development procedures for a number of specific pollutants of concern. Last, it provides a mechanism to work cooperatively with EPA Region 1 to develop and standardize methods for determining TMDLs for several pollutants for which protocols are not well established.

As previously stated the Department believes that for many impaired waters in Massachusetts, efforts to improve water quality and restore uses have already been initiated in the absence of a formal TMDL. As such these efforts meet the intent of the TMDL goals and objectives. Given this, implementation rather than re-evaluation is of primary importance. To address this issue DEP plans to utilize approximately 70 to 80 existing lake diagnostic/feasibility studies which have been conducted for lakes on the state impaired waters list (303d) to develop TMDLs. A list of those lakes identified for DEP review is attached (attachment No. 3). Following public review, these studies will be submitted to EPA for approval under the TMDL program.

There are many different types of pollutants causing water quality violations in the Commonwealth. Development of TMDLs to address these pollutants can vary from a simplified dilution calculation to complex water quality modeling. In order to address these issues in a comprehensive and defensible manner it will be critical to work closely with EPA to identify data needs and to develop standardized protocols necessary for future TMDL development. To accomplish this goal DEP is conducting a pilot program on the Nashua River (in conjunction with EPA) to obtain data and define how TMDLs may be developed.

In addition to the above, DEP will continue to re-evaluate and strengthen the 303d list. During development of the 303(d) list for submittal to EPA in 1998, DEP recognized that many of the listed waters were either based on limited information or data. Although those segments have remained on the list DEP identified them as segments requiring additional evaluation to determine if they meet required criteria necessary for inclusion on future 303(d) lists.

ATTACHMENT 1

PERCENTAGE OF TMDLs TO BE DEVELOPED BY CATEGORY

WATERSHED	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nashua, Blackstone, Chicopee, Connecticut	A-50%					A-50% B-25%					B-75%		
French, Quinebaug, Merrimack, Parker, Boston Harbor, Mt. Hope Bay, Cape Cod, Narragansett		A-50%					A-50% B-25%					B-75%	
Deerfield, Millers, Ipswich, Shawsheen, Buzzards Bay, Island			A-50%					A-50% B-25%					B—75%
Westfield, Concord, Farmington, Taunton, South Coastal				A-50% B-25%					A-50% B-75%				
Hudson, Housatonic, Charles, Ten Mile, North Coastal					A-50% B-25%					A-50% B-75%			

ATTACHMENT NO. 2

Category A: Technical Methods Considered Well Developed¹

1. Pathogens (Bacteria) only
2. Chlorine
3. Excessive Non-Native Plants (exotic species also associated with nutrient enrichment)
4. Excessive Native Plants (nutrient enrichment)
5. Nitrogen & Phosphorus for Lakes
6. Unionized Ammonia

Category B: Technical Methods Needing Further Development/Refinement

1. pH
2. Priority organics
3. Suspended Solids & Dissolved Solids
4. Thermal Impacts
5. Toxicity of Unknown Origin
6. Pesticides
7. Turbidity
8. Silt
9. Oil & Grease
10. Inorganic chemicals including metals
11. Non-priority organics
12. Taste and Odors
13. Nutrients in River System
14. Nitrogen and Phosphorus in coastal waters

¹ The majority of TMDLs required are for constituents listed in category A.

CLEAN LAKES

PROGRAM PROJECTS

APPEARING

ON THE

303(d)

LIST

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATERSHED MANAGEMENT

1997

**CLEAN LAKES PROGRAM PROJECTS
APPEARING ON 303(d) LIST**

1997

WATERSHED	LAKE/POND	D/F REPORT	DATE	IMPLEMENTATION REPORT	DATE
HOOSIC	NONE				
HOUSATONIC	Lake Buel: Monterey/New Marlborough			Harvester Purchase and Design of Outlet Control EIR: Seasonal Drawdown and Harvesting	1983 No Report Found
	Onota Lake: Pittsfield	Yes	1991		1989
	Prospect Lake: Egremond	Yes	1991		
	Stockbridge Bowl: Stockbridge	Yes	1991		
CONNECTICUT	Arcadia Lake: Belchertown	Yes	1985	Septic System Management	1989
	Forge Pond: Granby	Yes	1989		
	Metacomet Lake: Belchertown	Yes	1985	Septic System Management	1989
	Nashawannuck Pond: Eashampton	Yes	1986		
	Watershops Pond: Springfield	Yes	1986		
MILLERS	Kendall Pond: Gardner	Yes	1989		
CHICOPEE	Dimmock Pond: Springfield	Yes	1988		
	Hardwick Pond: Hardwick	Yes	1993	Flow Control	1989
	Quaboag Pond: Brookfield	Yes	1986	Phase II Report Seepage Report	1994
	Quacumquasit Pond: Brookfield/Sturbridge	Yes	1986		1994
	Upper Van Horn Park: Springfield	Yes	1990		

**CLEAN LAKES PROGRAM PROJECTS
APPEARING ON 303(d) LIST**

1997

WATERSHED	LAKE/POND	D/F REPORT	DATE	IMPLEMENTATION REPORT	DATE
QUINEBAUG	Big Alum Pond: Sturbridge	Yes	1985		
	Cedar Pond: Sturbridge	Yes	1983		
	Hamilton Reservoir: Holland	Yes	1983		
	Prindle Lake: Charlton	Yes	1990		
	Walker Pond: Sturbridge	Yes	1985	Dredging Project	1990
FRENCH	Webster Lake: Webster	In-House Study		Septic System Management	1988
BLACKSTONE	Indian Lake: Worcester	Yes	1989		
	Leesville Pond: Auburn/Worcester	Yes	1990		
	Lake Quinsigamond: Worcester	Yes	Several In- House and 1981	Several: Stormwater Modelling, Etc.	1972; 1981; 1982; 1989
	Lake Ripple: Grafton	Yes	1986		
	Hovey Pond: Grafton	Yes	1979		
	Salisbury Pond: Worcester	Yes	1987		
	North Pond: Hopkington/Milford	Yes	1987		
	Flint Pond: Shrewsbury/Grafton/Worcester	In-House		Watershed Management Plan	1982
	Stetson Pond: Pembroke	Yes	1993		
TAUNTON					

**CLEAN LAKES PROGRAM PROJECTS
APPEARING ON 303(d) LIST**

1997

WATERSHED	LAKE/POND	D/F REPORT	DATE	IMPLEMENTATION REPORT	DATE
MYSTIC	Ell Pond: Melrose	Yes	1985	Storm Drain Project	1989
	Spy Pond: Arlington	In-House Diag.			
		Feasibility	1982		
CHARLES	Wedge Pond: Winchester	Yes	1988	Final EIR for the Restoration of Hardy Pond	1996
	Blacks Nook: Cambridge	Yes	1987		
	Box Pond: Bellingham	Yes	1990		
	Bullough's Pond: Newton	Yes	1990		
	Halls Pond: Brookline	Yes	1986		
NEPONSET	Hardy's Pond: Waltham	Yes	1986		
	Jenning's Pond: Natick	Yes	1986		
	Lake Winthrop: Holliston	Yes	1985		
WEYMOUTH AND WEIR	Lake Massapoag: Sharon	Yes (two of them)	1984 & 1987		
	Foundry Pond: Hingham	Yes	1992		
NASHUA	Lake Holbrook: Holbrook	Yes Final Draft Final	1989 1994		
	Bare Hill Pond: Harvard	Yes	1987		
	Harbor Pond: Townsend	Yes	1988		
CONCORD	Lake Shirley: Lunenburg	Yes	1988		
	Bartlett Pond: Northborough	Yes	1986		

**CLEAN LAKES PROGRAM PROJECTS
APPEARING ON 303(d) LIST**

1997

WATERSHED	LAKE/POND	D/F REPORT	DATE	IMPLEMENTATION REPORT	DATE
CONCORD (Continued)	Boons Pond: Hudson/Stow	Yes	1986	Stormwater Renovation and Harvesting	On-Going as of 1987-1988 (Final Report?)
	Chauncy Lake: Westborough	Yes	1986		
	Lake Cochituate: Framingham/ Natick/ Wayland	Yes, but not under CLP	1980		
	Dudley Pond: Wayland	Yes	1983		
	Fort Meadow Reservoir: Marlborough	Yes	1987 Revised 1988		
	Long Pond: Littleton	Yes	1991		
SHAWSHEEN	Fawn Lake: Bedford	Yes	1989		
MERRIMACK	Forest Lake: Methuen	Yes	1990		
	Forge Pond: Westford/Littleton	Yes	1987 1988		
	Mill Pond: West Newbury	Yes	1992		
	Knop's Pond (Lost Lake): Groton	Yes			
	NONE				
PARKER	NONE				
IPSWICH					
NORTH COASTAL	Browns Pond: Peabody	Yes	1989		
	Chebacco Lake: Hamilton/ Essex	Yes	1985		

**CLEAN LAKES PROGRAM PROJECTS
APPEARING ON 303(d) LIST**

1997

WATERSHED	LAKE/POND	D/F REPORT	DATE	IMPLEMENTATION REPORT	DATE
NORTH COASTAL (Continued)	Flax Pond: Lynn	Yes for Sluice and Flax Pond	1986		
	Floating Bridge Pond: Lynn	Yes	1986		
	Lake Quannapowitt: Wakefield	Yes	1986		
	Sluice Pond: Lynn	Yes	1986		
SOUTH COASTAL	Billington Sea: Plymouth	Yes	1990		
	Furnace Pond: Pembroke	Yes (Includes Furnace, Little Sandy Bottom and Stetson Ponds)	1993		
	Oldham Pond: Pembroke	Yes (Includes Furnace, Little Sandy Bottom and Stetson Ponds)	1993		
BUZZARDS BAY	Buttonwood Park Pond: New Bedford		1988		
CAPE COD	Bearse Pond: Barnstable	Yes	1989		
	Great Pond: Eastham	Yes (Includes Wequaquet and Long Ponds)	1987	Implementation for Ground Water and Aquatic Plants	1991
	Herring Pond: Eastham	Yes	1991		
	Red Lily Pond: Barnstable	Yes	1987	Wastewater and Drainage Disposal Analysis	1989
	Shallow Pond: Barnstable	Yes	1991		
	Sheep Pond: Brewster	Yes	1993		
		Yes			

V. SHORT AND LONG-TERM STRATEGIES

A. NONPOINT SOURCE PROGRAM

In addition to the NPS Action Strategy described earlier in Section II of this report, the updated NPS Management Plan, Volume III, listed several actions which constitute the short and long-term goals of the NPS Program. It will be noted that these goals include the implementation of TMDLs to improve the water quality of the 303(d) waterbodies. It is fair to state that the TMDL Program will have a continuing major impact on most water quality related programs by setting priorities for improving the state's 303(d) waterbodies.

SHORT AND LONG-TERM GOALS

The following tables contains the Departments Nonpoint Source Program's short and long-term goals for enhanced water quality throughout the Commonwealth.

TABLE 1 - LAKES

WATER RESOURCE	SHORT TERM GOAL ON OR BEFORE 2005	LONG-TERM GOAL ON OR BEFORE 2015	STRATEGY/ACTION
Lakes - General	50% or 15,300 acres of 303(d) listed lakes will be enhanced, and thus delisted from the 303(d) list	100% or 30,600 acres of 303(d) listed lakes will be enhanced, and thus delisted from the 303(d) list.	Implementation of TMDLS for 303(d) lakes in accordance with the TMDL Strategy Schedule.
Lakes – Specific Examples	Hall's Pond, Brookline, restoration: one (1) acre will be enhanced to allow for non-contact recreation		Implementation of 319 Restoration Project 97-08.
	Onota Lake, Pittsfield, restoration: 617 acres will be enhanced which will improve the trophic state from eutrophic to mesotrophic.		Implementation of 319 Restoration Project 97-08.
	Lake Noquochoke, Dartmouth, enhancement of 167 acres to allow swimming and boating.		Implementation of SRF Clean Water Investment Project No. 207 (1998). Construction of sewer around lake to eliminate failing Title 5 Systems.
	Cedar Pond, Sturbridge, restoration: 138 acres will be enhanced which will improve the trophic state from eutrophic to mesotrophic.		Implementation of SRF Clean Water Investment Project No. 125 (1998). Construction of pressure sewers around pond to eliminate failing Title 5 Systems.
Lakes	38 Lakes with developed TMDLs (See list next page)		Implementation of BMPs for nutrient control and other NPS strategies as per each TMDL

LAKES WITH DEVELOPED TMDLs

LAKE NAME	TOWN	ACRES
Bare Hill Pond	Harvard	321
Browning Pond	Oakham/Spencer	106
Long Pond	Springfeild	18
Minechoag Pond	Ludlow	21
Mona Lake	Springfield	11
Spectacle Pond	Wilbraham	16
Sugden Reservoir	Spencer	83
Wickaboag	West Brookfield	320
Auburn Pond	Auburn	16
Brierly Pond	Millbury	18
Curtis Ponds	Worcester	36
Curtis Ponds	Worcester	18
Dorothy Pond	Millbury	148
Eddy Pond	Auburn	134
Green Hill Pond	Worcester	32
Howe Reservoirs	Millbury	13
Jordan Pond	Shrewsbury	20
Mill Pond	Shrewsbury	16
Newton Pond	Shrewsbury/Boylston	48
Pondville Pond	Auburn	41
Smith Pond	Leicester	20
Southwick Pond	Leicester/Paxton	36
Stoneville Pond	Auburn	43
Shirley Street Pond	Shrewsbury	17
Leverett Pond	Leverett	65
Loon Pond	Springfield	25
Lake Warner	Hadley	68
Lake Wyola	Shutesbury	129
Aldrich Lake	Granby	18
Aldrich Lake	Granby	11
Lake Boon	Hudson	163
Indian Lake	Worcester	173
Salisbury Pond	Worcester	15
Leesville Pond	Auburn	50
Lake Quinsigamond	Worcester	475
Flint Pond	Worcester	253
	TOTAL ACRES	2998

SHORT AND LONG-TERM GOALS (CONTINUED)

TABLE 2 – RIVERS

WATER RESOURCE	SHORT TERM GOAL ON OR BEFORE 2005	LONG-TERM GOAL ON OR BEFORE 2015	STRATEGY/ACTION
River – General	10% or 117.6 miles of 303(d) listed rivers and streams will meet water quality standards.	100% or 1,176 miles of 303(d) listed rivers and streams will meet water quality standards.	Implementation of TMDLS for 303(d) rivers and streams in accordance with the TMDL Strategy Schedule.
River – Specific Example	Mill Brook, Concord, restoration: approximately one (1) mile will be enhanced to restore its native fish population.		Implementation of 319 Restoration Project No. 98-04.
	Connecticut River, from Turners Falls to the VT/NH border: 1,000 feet of shoreline will be stabilized to upgrade fisheries, habitat and riparian habitat used by migratory birds.		Implementation of 319 Restoration Project No. 00-04.
	Lower Charles River will be fishable and swimmable.	Charles River: 62 miles will be enhanced to the point of meeting water quality standards.	Implementation of SRF Clean Water Investment Projects (Continued next page)
	Charles River and tributaries in and around Needham: improvement of stormwater drainage system to meet pathogen water quality standard: development of management plan.		Implementation of SRF Project No. 323
	Charles River – Dedham area: conduct stormwater management planning to reduce pollutant loading to meet water quality standards.		Implementation of SRF Project No. 157
	Charles River: Laundry Brook elimination of sanitary waste discharges to achieve water quality standards.		Implementation of SRF Project No. 394
	Charles River: Gardner Street Landfill near Sawmill Brook in Boston area capping of landfill to stop leachate from discharging ultimately to Charles River.		Implementation of SRF Project No. 319
	Charles River and Alewife Brook in Cambridge area: eliminate illicit connections and about 422 common manholes and lamp holes that provide interconnections between sanitary and storm drain system: project will control pathogen violations and reduce wet weather flow to Deer Island WWTP.		Implementation of SRF Project No. 128
	Charles River and Beaverdam Brook: Framingham extension sewer will be improved by installing 25,000 lf. force main, a 21 mgd pump station, 11,000 lf. gravity sewer and rehab of 23,000 lf. of existing sewer; result will eliminate surcharge and discharge of sewage into Charles River and Beaverdam Brook		

SHORT AND LONG-TERM GOALS (CONTINUED)

TABLE 3 – COASTAL

WATER RESOURCE	SHORT TERM GOAL ON OR BEFORE 2005	LONG-TERM GOAL ON OR BEFORE 2015	STRATEGY/ACTION
Coastal – General	10% or 16.9 square miles of 303(d) listed coastal waters will be enhanced to allow the re-opening of previously closed shellfish beds.	100% or 169 Square miles of 303(d) listed coastal waters will be enhanced to allow the re-opening of previously closed shellfish beds.	Implementation of TMDLS for 303(d) coastal waters in accordance with the TMDL Strategy Schedule.
Coastal – Specific Examples	Three Bay Area, Barnstable, restoration: one-half (½) square mile will be enhanced to re-open closed shellfish beds and upgrade two herring runs.		Implementation of 319 Restoration Project 97-09.
	Little Harbor, Cohasset, restoration: 0.29 square mile will be enhanced.		Implementation of TMDL.
		Boston Harbor (includes Boston Inner Harbor, Dorchester Bay, Quincy Bay, Hingham Bay, Hingham Harbor, Hull Bay and Winthrop Bay): 47 square miles will be enhanced.	Implementation of SRF Clean Water Investment Projects: (Continued next page)
	Buzzards Bay: 1000 acres of shellfish beds reopened.		Implementation of the Buzzards Bay EPA approved workplan
	Winsegansett Marsh, Fairhaven. Salt-marsh restoration of 34 acres.		Implementation of 319 project and EPA's Five Star Grant project.
	Hammett's Cove, Marion. Salt-marsh restoration of 7 acres		Implementation of project plan funded by EOEA's Grow Wetlands Program.
	Sandy Neck Cove, Dartmouth. Salt-marsh restoration of 5 acres.		Implementation of salt-marsh restoration project funded by National Marine Fisheries Services.

SHORT AND LONG-TERM GOALS (CONTINUED)

TABLE 3 – COASTAL

WATER RESOURCE	SHORT TERM GOAL ON OR BEFORE 2005	LONG-TERM GOAL ON OR BEFORE 2015	STRATEGY/ACTION
Coastal-Specific (Continued)	Buttermilk Bay and Little Buttermilk Bay, Bourne and Wareham. Upgrade of 540 acres of shellfish beds.		Implementation of Buttermilk Bay restoration project funded by the 319 Program, CZM's Coastal Pollution Remediation Program, and ISTEA.
	Eel Pond, Bourne. Re-open 15 acres of Shellfish beds.		Implementation of restoration project funded by CZM's Coastal Pollution Remediation Program.
		Boston Harbor: MWRA CSO system control plan which includes 25 separate projects implementing a variety of CSO control technologies to eliminate wet weather pollutant loading	Implementation of SRF Project No. 358
		Boston Harbor: MWRA effluent outfall tunnel Phase E: includes construction of effluent outfall conduit to the outfall shaft for discharge of Deer Island WWTP to Mass. Bay.	Implementation of SRF Project No. 379
		Boston Harbor: MWRA Quincy Pump facilities project involves replacement of 3 outdated pump stations and rehab of the force mains.	Implementation of SRF Project No. 104
		Boston Harbor: City of Boston Long Island Sewer Connection: project will construct pretreatment facility to eliminate discharge permit violations.	Implementation of SRF Project No. 331

B. Coastal Zone Management Program

The Massachusetts Coastal Zone Management (CZM) Nonpoint Pollution Control Program (often referred to as the 6217 Program or Plan) also has short and long-term strategies. The Nonpoint Source Management Plan (often referred to as the 319 Plan) emphatically embraces the Coastal NPS Plan and makes the so-called 6217 Plan an integral part of the overall state NPS Management Plan. The plan must comply with federal program guidance that employs an initial technology-based approach generally throughout the coastal management area, to be followed by a more stringent water-quality based approach, where necessary, to address known water quality problems. The management measures developed in the coastal plan will be implemented on a state-wide basis in Massachusetts except, of course, those management measures that are singularly applicable to coastal watersheds.

The following section describing CZM's NPS Pollution Control short and long-term strategies is taken from the NPS Management Plan as provided by Coastal Zone Management. The first item below, however, is a separate strategy currently being pursued by the Department of Environmental Protection and the School of Marine Science and Technology at University of Massachusetts at Dartmouth. This project centers around the very important issue of coastal embayment enrichment and potential ways to address this pervasive problem through the TMDL program.

1. TMDL Evaluation for Management of Nitrogen Sensitive Embayments

Massachusetts Department of Environmental Protection

and

School of Marine Science and Technology, UMass Dartmouth

Purpose: The overall goal of the effort is to provide technical guidance to DEP relative to policies on nitrogen sensitive embayments and to develop nitrogen TMDL's on Massachusetts embayments. School of Marine Science and Technology (SMAST) technical experts will work with DEP to classify the sensitivity of Massachusetts shallow coastal water bodies, conduct quantitative TMDL modeling and to put forward available options for meeting nitrogen goals (or targets) for these embayments.

Rational: Coastal embayments throughout the State of Massachusetts (and the U.S. eastern seaboard) are becoming nutrient enriched. Many of Massachusetts' embayments are approaching or are currently over their level of watershed nutrient loading which begins to cause declines in their ecological health. The primary nutrient causing the increasing impairment of the State's coastal systems is nitrogen and the primary source of this nitrogen is wastewater disposal. At present there is a critical need for state-of-the-art approaches for evaluating and restoring nitrogen sensitive and impaired embayments. Within southeastern Massachusetts alone, almost all of the municipalities are grappling with Comprehensive Wastewater Planning. These municipalities are seeking guidance on the assessment of nitrogen sensitive embayments and the available options for meeting nitrogen goals. For example, on Cape Cod the towns of Chatham, Falmouth, and Mashpee (and soon Orleans) are in the midst of determining the nitrogen sensitivity of their embayments as part of wastewater planning and encountered problems with existing approaches. The present effort by DEP and SMAST aims at addressing these issues.

Goal: The goal of the Massachusetts Estuary Project is to:

- Develop a coastal TMDL working group for prioritizing and rapid transfer of results
- determine the nutrient sensitivity of each of the State's embayments
- prioritize the systems as to TMDL need
- complete SMAST's determination of available high quality data for each embayment
- fill in "data-gaps" required for modeling
- conduct quantitative TMDL analysis
- provide Web access of results to DEP managers
- keep each embayment's model "alive" to address future regulatory needs.

Approach:

SMAST has been developing TMDL methodologies for coastal systems since the mid 1980's. SMAST, researchers with their collaborators have developed a quantitative approach for determining an embayments:

1. Nitrogen sensitivity;
2. nitrogen threshold loading levels (TMDL);
3. quantitatively evaluating effects of changes in loading rate.

The approach is fully field validated and unlike many approaches accounts for nutrient sources, attenuation, and recycling and variations in tidal hydrodynamics. To apply this methodology a variety of field data and models must be employed, specifically:

- Monitoring – multi-year embayment nutrient sampling

- ➡ Hydrodynamics -
 - embayment bathymetry
 - site specific tidal record
 - salinity surveys (for validation)
 - current records (in complex systems only)
 - hydrodynamic model

- ➡ Watershed Nitrogen Loading
 - watershed delineation
 - stream flow (q) and nitrogen load
 - land-use analysis (GIS)
 - watershed N model

- ➡ Embayment TMDL – Synthesis
 - linked Watershed-Embayment N Model
 - rate of n recycling within embayment
 - D.O. record
 - Macrophyte survey
 - Infaunal survey (in complex systems)

Over the past decade SMAST researchers have been accumulating the necessary base data on embayments throughout Massachusetts for the application of this quantitative TMDL approach. Early in the process it became clear that the need for multi-year nutrient-water quality data collection on the wide variety of embayments presented a major obstacle. To this end SMAST helped to establish a large embayment monitoring effort in collaboration with local stakeholders, municipalities, regional and state agencies. At this time almost all of the embayments in S.E. Massachusetts have on-going monitoring or are planning programs for start-up in 2001. SMAST provides the technical guidance, analytical facility and synthesis for more than 95% of these monitoring programs. In addition, SMAST with its collaborators will have completed TMDL's for almost 10 major embayment systems by mid-2001 and has assembled much of the required data for many of the larger remaining systems.

**MASSACHUSETTS COASTAL ZONE MANAGEMENT
COASTAL NONPOINT POLLUTION CONTROL PROGRAM
5-YEAR IMPLEMENTATION PLAN
15-YEAR PROGRAM STRATEGY**

2. Urban Areas

A. Urban Areas: Stormwater Management
--

1. Long Term (15 Year) Goal:

By 2015, implementation of the Massachusetts Stormwater Policy and Management Standards through the Wetlands Protection and other Programs such as NPDES Phase II will reduce water quality impairments, remove waters from the state's 303d list, restore segments not supporting, and protect supporting beneficial uses such as shellfish beds and swimming beaches.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Increase compliance of stormwater policy implementation through continued technical assistance and education efforts.
- Specific targeted hands-on technical assistance to local officials, such as Conservation Commissions, through CZM, DEP, NRCS, MassBays, and Buzzards Bay Project technical and regional staff.
- Through DEP and local conservation commissions: ongoing compliance and enforcement of stormwater plans at project sites.
- Continued implementation of the DEP Circuit Rider Technical Assistance in each regional office. Dedicated staff in each region provide hands-on technical assistance to communities.
- Re-write of the Hydrology Guidance document for conservation commissions, local officials, and others.
- Contingent on funding, develop and implement a fifth round of stormwater workshops.
- Continued review and fine-tuning of the MA Stormwater Standards through the Stormwater Advisory Committee and Technical Committee.
- Develop and distribute informational and educational material as necessary, including a Stormwater Policy FAQ and a Technical Guidance Bulletin for Recharge of Stormwater.
- Targeted assessment work by DEP to identify existing municipal discharges not attaining state standards and issuance of non-compliance letters.
- Continued implementation of Coastal Pollutant Remediation Program, funding approximately \$2 million on approximately 40 stormwater assessment and remediation projects in coastal watershed towns and municipalities.
- Development of an indicative project summaries informational document for the Coastal Pollutant Remediation Program which provides information (project description, constituent of concern and resource, remediation scheme/technology and any follow-up info) for past CPR projects. The goal of the document is to provide info (in the form of brief case studies) to municipal decision-makers regarding stormwater mitigation options.
- Contingent on funding, develop and implement pilot testing project for innovative stormwater treatment technologies, evaluating performance of 3 installations each of 4 technologies.
- NPDES Phase II assistance to affected municipalities: workshops, technical assistance, guidance material.
- Stormwater "daylighting" in the Charles and Neponset. Stormwater daylighting is a technique that uncovers stormwater conduits and exposing (or restoring) the channel as a more natural streambed.

B. Urban Areas: Onsite Disposal Systems (Title 5)

1. Long Term (15 Year) Goal:

By 2015, through continued implementation of the MA Title 5 code, impairments to surface waters and drinking water supplies will be reduced and all septic systems failing to meet Title 5 requirements will be upgraded at time of transfer or when specifically identified and assessed as causes of surface or ground water quality violations.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Continued technical assistance through specific training to local Boards of Health, soil evaluators, and system inspectors as proposed in DEP's Local Capacity Building Initiative Report (Jan. 2000)
- Continuation of the funding assistance programs: Homeowner Septic Loan Program, Comprehensive Community Septic Management Program, and the State Revolving Fund.
- Community wide facilities planning process: DEP to continue to evaluate and approve proposals for facilities planning that include an integrated approach to wastewater management, i.e. the use of on-site system upgrades coupled with conventional wastewater treatment facilities to address town-wide wastewater needs in an economical fashion.
- Education efforts for affected public and others, including Wastewater News and Waterlines.
- Expanded use of DEP web site to act as clearinghouse for publications and information.
- Issue comprehensive wastewater management guidance to municipalities and conduct training for same to correct major problems in most environmentally sound manner.
- DEP to evaluate and revise the Title 5 regulations, as appropriate, to improve the regulations as necessary.
- Continue to encourage the development of and approve innovative/alternative technologies for the onsite treatment and disposal of sewage
- MA Septic System Test Center will contribute to the reduction of coastal non-point contamination by onsite disposal systems in the following ways:
 - ✓ The Test Center will provide verification of contaminant (nutrient, organic load and pathogen) removals by alternative/innovative onsite disposal systems which can provide superior quality of effluent discharged to ground water.
 - ✓ The Test Center will provide verification of conventional (Title 5) onsite disposal systems to serve as benchmark for comparison with I/A technologies and will provide needed data on levels of contaminant release to ground water by conventional systems.
 - ✓ The Test Center will provide a platform for research and development testing of new onsite disposal technologies, components and materials for technology vendors and DEP, which may improve both I/A and conventional performance. The Test Center will conduct outreach on I/A and conventional technologies to Boards of Health, health agents, system designers and the public in the form of facility tours and training workshops, through published reports on verified technology performance furnished to MA Boards of Health, through publication of testing results on the Test Facility webpage on the Buzzards Bay Project website and through print media articles.

C. Urban Areas: Erosion, Sedimentation, and Construction Site Control

1. Long Term (15 Year) Goal:

By 2015, through continued implementation of the Wetlands Protection Program performance standards, local site planning and project review through the Subdivision Control Act, and pro-active education on efforts such as conservation planning and sensitive development, the quantity of water resources assessed as non-supporting due to turbidity or suspended solids from site development sources will be substantially reduced.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Through DEP and local conservation commissions: ongoing compliance and enforcement of erosion control measures at project sites.
- Continued implementation of the DEP Circuit Rider Technical Assistance in each regional office. Dedicated staff in each region provide hands-on technical assistance to communities.
- Development of state-endorsed model by-laws and regulations for local municipalities.
- Technical assistance to assist Massachusetts communities in the development, adoption, and implementation of these local by-laws and regulations through the Massachusetts' National Estuary Programs—the Buzzards Bay Project and the Massachusetts Bays Program—and other state efforts.
- Regional planning agencies in Massachusetts, such as the Cape Cod Commission, the Metropolitan Area Planning Council, the Merrimack Valley Planning Commission, and the Southeastern Regional Planning and Economic Development District, will also provide direct assistance to communities to support local level control of stormwater, erosion and sediment, and chemical controls.
- North Shore Regional Conservation Subdivision Pilot: MCZM to continue to work with an alliance of local officials, developers, engineers, realtors, conservation organizations, and state agencies to create and promote innovative sustainable development designs that protects land and water resources while maximizes the economic potential. The Alliance intends to begin bylaw distribution and outreach program in Spring 2000, focusing on the Parker River regional Area of Critical Environmental Concern communities in Phase One. Phase Two will include targeting communities outside the ACEC but having impact to that ecosystem.
- Middlesex Conservation District to continue to offer the program service to its 52 communities to review erosion and sedimentation plans for all soil disturbing projects over 5000 sq.ft. The district charges on an hourly basis so the program has built in sustainability.
- The current publication, Massachusetts Guidelines for Erosion & Sediment Control in Urban and Suburban Areas, will be scanned and posted on the Web in its entirety (including pictures).
- The fourteen Conservation District offices will continue to work closely with USDA - NRCS to develop and implement Conservation Plans on private lands - primarily agriculture.
- The Plymouth County Conservation District continues with its full time staff position for designing conservation plans on cranberry bogs. This program is focused on cranberry bogs because of the high demand and the very high workload. They expect the program to continue for at least another two years.

D. Urban Areas: Watershed Protection

1. Long Term (15 Year) Goal:

By 2015, Watershed Teams will have completed Comprehensive Watershed Assessments and 5-Year Watershed Action Plans identifying priority areas of NPS concern for further outreach, research, assessment, planning and implementation. Teams will work collaboratively with local stakeholders to identify sources of impairments due to non-point source pollution as well as strategies to address the impairment. Teams will implement priority projects resulting in water quality improvements and protection of sensitive habitat areas and resources.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Each year, 75% of the state's watersheds will have at least one priority project which addresses aspects of NPS pollution control;
- Watershed teams will provide technical assistance and guidance to watershed organizations and municipal boards regarding the implementation of the Phase II Stormwater rules;
- Watershed teams will work to assess sources of NPS contamination;
- Watershed teams will work to implement Agricultural BMP's;
- Watershed teams will work to identify meaningful 319 projects;
- Watershed teams will make recommendations for the protection and preservation of lands that have sensitive habitat or resource areas from NPS pollution;
- Watershed teams will work with towns to adopt conservation zoning bylaws or environmentally prudent zoning to protect natural resources from NPS pollution;
- Watershed teams will implement rapid watershed planning tools and techniques to assess small subwatersheds, using impervious cover as the indicator for stream quality;
- Watershed teams will engage watershed organizations and municipalities in NPS pollution control through outreach and education efforts;
- Watershed teams will manage restoration projects involving stormwater treatment systems to remove sediment and other NPS pollutants;
- Watershed teams will engage local constituents and work to control NPS pollution by weighing in on NPDES permits and implementing TMDL's before, during, and after the public participation process;
- The Watershed Initiative supports the efforts of watershed organizations and other groups by offering various funding opportunities, such as watershed stewardship service contracts to make environmental improvements; volunteer monitoring grants for volunteer groups to collect water quality data, and Communities Connected by Water service contracts for watershed organizations to work with municipalities to integrate growth planning with environmental protection.

E. Urban Areas: Roads and Highways

1. Long Term (15 Year) Goal:

By 2015, all new state and local roads, highways, bridges, and facilities will be in full compliance with the Stormwater Policy and Management Standards where practicable. Existing roads, highways, bridges, and facilities will incorporate adequate NPS Best Management Practices when reconstruction, widening or drainage work is planned OR such BMPs will be programmed when water quality assessments demonstrate violations of standards.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- A minimum of four regional workshops will be held on the new MHD policy/“meeting-the-stormwater-standards” document (MHD Volume 1).
- MHD will finalize the road and highway engineering and BMP specifications document (MHD Volume 2).
- A minimum of four regional workshops will be held on the MHD Volume 2 document
- State Highway Facilities will continue compliance through implementation of the MHD Environmental Management System.
- MHD and the Department of Transportation will implement NPDES Phase II requirements within established timeframes.

3. Marinas and Recreational Boating

A. Marinas and Recreational Boating: Marina Siting

1. Long Term (15 Year) Goal:

By 2015, all new marine facilities sited in Massachusetts receive planning and implementation assistance from the MCZM marina technical assistance staff prior to or during CZM federal consistency or MEPA review. As a result, new and expanded marinas are designed and sited in such a manner as to minimize impacts on water quality and aquatic resources.

2. Actions/Implementation Efforts (to 2005):

The following actions and benchmarks are anticipated:

- During pre-application technical assistance or permitting review, designs for new marinas incorporate pump-outs, improved fueling facilities, stormwater management, and hull maintenance facilities.
- Marina guidance document published and in the hands of all marine facility operators.
- Workshops held throughout Massachusetts' to publicize the document.
- MCZM marina technical assistance team is created and staff are educated and prepared to provide expertise in the siting, design, construction and operation of new marine facilities.
- Contingent on funding, a small-grants program developed to fund pollution prevention technologies at new and existing public and private marine facilities.

B. Marinas and Recreational Boating: Marina Operation

1. Long Term (15 Year) Goal:

By 2015, implementation of the Massachusetts Clean Marina Program, and state regulatory programs (CZM federal consistency, Stormwater Policy and Management Standards, MEPA, and Chapter 91) will reduce water quality impairments, remove waters from the state's 303d list, restore segments not supporting, and protect supporting beneficial uses such as shellfish beds and swimming beaches.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- MCZM marina technical assistance team is created and staff are educated and prepared to provide expertise in the siting, design, construction and operation of new marine facilities.
- Marina guidance document published and in the hands of all marine facility operators.
- As part of the guidance document, boater education brochures will be developed and distributed to inform the boating public of issues concerning recreational boat use and water and aquatic habitat degradation. Brochures will contain recommendations and steps to prevent and minimize such impacts.
- Five workshops will be held in Fall 2000 in five regions throughout Massachusetts' to publicize the release of the document and provide specific technical assistance and education.
- Contingent on available funding, a second and third phase of workshops will be run in 2001 and 2003.
- Contingent on available funding, a small-grants program will be developed to fund BMPs and other environmental improvements for new and existing marine facilities. This program will likely provide small grants, cost-share or no/low interest loans for: vacuum sanders for hull maintenance; hull washing facilities; purchase, operation and maintenance of pump-out facilities; public and boater education; fueling station retrofitting and maintenance; and solid, liquid, recyclable and hazardous waste management.
- Contingent on available funding, a Clean Marina Program will be piloted and evaluated to encourage marinas to develop and implement marina management plans. Participants in the program receive publicity

from the state, a flag to fly over their facility and are free to use a Clean Marina logo in any advertisements and correspondence. Program is developed as a positive approach, which recognizes the efforts of marinas to protect the resources that provide their livelihood.

- Contingent on available funding, a pilot technical assistance and inspection program will be developed, implemented and evaluated. In a specific region, all marina operations will be visited and reviewed for implementation of good housekeeping and BMPs. Technical advice and steps to implement BMPs will be delivered. Through the coordination of annual marina operator's license with DEP Chapter 91 program, follow-up visits will determine efforts to meet inspection recommendations and compliance.

C. Marinas and Recreational Boating: Pump-Out Facilities

1. Long Term (15 Year) Goal:

By 2015, state waters of Massachusetts will be an approved No-Discharge Area (NDA). Pump-out facilities will be installed so that one facility exists for every 450 boats with marine sanitary devices.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Contingent on continued CVA funding, a grants program will continue to fund purchase, operation and maintenance of pump-out facilities at private new and existing marine facilities. Increased emphasis will be given to supporting operation and maintenance for existing facilities.
- With the efforts for statewide NDA designation, increased efforts will be given to enforcement by local harbor masters and state environmental police.
- Marina guidance document published and in the hands of all marine facility operators.
- As part of the guidance document, boater education brochures will be developed and distributed to inform the boating public of the need, requirement, and availability of pump-out facilities.
- This brochure and others will be distributed to all Massachusetts' boaters with their registrations.

A. Marinas and Recreational Boating: Recreational Boating and Public Education

1. Long Term (15 Year) Goal:

By 2015, education efforts aimed at recreational boaters will be fully developed, in-place and effective. Improvements in recreational boating best management practices will result in advances in the number of vessels equipped with pump-out ready holding tanks (marine sanitary devices), the practices of do-it-yourself hull cleaning and maintenance, and the number of marine stores selling environmentally friendly products.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Marina guidance document published and will be made available to recreational boaters who are do-it-yourself maintenance and repairs types through the CZM website and through hard copies distributed through CZM regional offices.
- As part of the guidance document, boater education brochures will be developed and distributed to inform the boating public of the need, requirement, and availability of pump-out facilities.
- This brochure and others will be distributed to all Massachusetts' boaters with their registrations.
- Educational signage provided to marine facilities.
- Contingent on funding, workshops targeted towards recreational boaters and boating groups will be organized and held to educate boaters about environmental concerns.
- MCZM participates and organizes activities for the National Clean Boating Campaign.

4. Agriculture

Goals (2000-2005)

By 2005, all farms known to cause impairment of water resources to levels violative of established water quality standards will have developed of Conservation Farm Plans, or the equivalent, and will have implemented 70% or greater of the Best Management Practices outlined in the respective plans.

By 2005 all Animal Feeding Operations (AFOs - farms with over 300 animal units) will have completed Conservation Farm Plans, or the equivalent.

Goals (2006-2010)

By 2010, all AFOs will have implemented 70% or greater of the Best Management Practices outlined in their respective Conservation Farm plans, or equivalent.

By 2010, the Department of Food and Agriculture will attempt to have identified those farms believed to pose significant threat to water resources. All identified as such will be strongly encouraged to develop Conservation Farm Plans, or the equivalent.

By 2010, the majority of all farms in Massachusetts will have voluntarily developed Conservation Farm Plans, or the equivalent. These plans will be designed so as to prevent pollution from the farm from causing water quality to fall below established water quality standards.

Goals (2011-2015)

By 2015 the Department of Food and Agriculture will attempt to ensure that 70% of the Best Management Practices described in respective Conservation Farm Plans, or the equivalent, have been implemented by farms believed to pose a significant threat to water resources.

A. Agriculture: Farm Planning

1. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- MA DEP and MA DFA will evaluate all known farms near water resources. Where there is evidence that activities on the farm may pose risks to water resources, this farm will be targeted to develop conservation plans either through the USDA- Natural Resources Conservation Service Farm Planning process, or other planning tool such as the “On Farm Strategies To Protect Water Quality” workbook.
- Through a variety of mechanisms, farmers will be contacted and encouraged to develop Conservation Farm Plans, or the equivalent. Technical and financial assistance options will be available to help implement BMP elements of the plans. The agencies and organizations assisting in this statewide effort include will include: UMASS, MA DFA, MDC, USDA-NRCS, USDA-FSA, EOEA-Watershed Initiative and agricultural organizations.
- Evaluation measures to determine success include:
 - ✓ Distribution of the Agricultural Environmental Enhancement (AEEP) and Environmental Quality Incentives Program (EQUIP) funds, and targetted fund from other agencies such as DEP and MDC.
 - ✓ Location and extent of implementation of best management practices or conservation plans,
 - ✓ Extent of cooperation between agencies to reach farmers and install best management practices in a timely manner to reach water quality standards,
 - ✓ Monitoring the Basin Team water quality assessment results and correlating inconsistencies attributable to agriculture,
 - ✓ Creation of a geographic information system data layer to show locations of farms implementing best management practices using state funding.

- NRCS will continue to provide direct conservation planning assistance through the Conservation Technical Assistance Program (CTA) and the Environmental Quality Incentives Program (EQIP). Other NRCS programs such as Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP) and the Wildlife Habitats Incentives Program (WHIP) will also be utilized where feasible.

B. Agriculture: Nutrient Management and Animal Feeding Operations

1. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- UMASS Cooperative Extension will develop 15 nutrient management plans over a three-year period for dairy farms with proximity to receiving waters.
- Pending adequate funding, 10 Nutrient management workshops will be held statewide during 2000 and 2001 to demonstrate to farmers how to develop nutrient management plans.
- NRCS will develop a certification program for engineers, agronomists and other qualified individuals to develop nutrient management plans by 2001.
- DFA, DEP and EPA will work cooperatively on an inspection/compliance program beginning in FY 2000.
- DFA will inspect all AFOs over 300 animal units for potential water quality impacts by 2001.
- DEP/EPA and DFA will work to assist farmers with significant, documented environmental problems with financial and technical assistance to remedy the problem. If the problem cannot be resolved in a reasonable period, then an individual NPDES permit will be issued.
- NRCS will continue to provide direct conservation planning assistance through the Conservation Technical Assistance Program (CTA) and the Environmental Quality Incentives Program (EQIP).

C. Agriculture: Grazing, Erosion & Sediment Control

1. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Potential water quality problems related to grazing, erosion and sediment runoff will be assessed and investigated by MA DFA, MA DEP and Watershed Initiative.
- Where problems are found, MA DFA, NRCS and UMASS will respond and offer educational, technical and financial assistance, as needed and available, to implement best management practices such as the implementation of grazing management plans, fencing, buffers, cover crops and other erosion control measures. Monitoring of this goal will be through the Watershed Initiative, NRCS, DEP and DFA as part of the normal monitoring and evaluation phase of their programs.
- NRCS to continue to provide direct conservation planning assistance through the Conservation Technical Assistance Program (CTA) and the Environmental Quality Incentives Program (EQIP).

D. Agriculture: Irrigation

1. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- DFA will encourage cranberry producers to implement approved water management plans. It is expected that the majority of this group of producers will have fully implemented the recommended best management practices.

- DFA will encourage other producers, on whose farms irrigation, erosion and sediment transport issues have been identified, to implement relative Best Management Practices. Trickle irrigation projects, and other BMP costs related to irrigation and water management, will be considered for cost share funding by both NRCS and DFA.
- DFA, UMASS and the Cranberry Institute will work to develop best management practices for the use and handling of pesticides and fertilizers introduced into chemigation systems.
- Monitoring of these goals will be conducted through the Watershed Initiative, NRCS and DFA as part of the normal monitoring and evaluation phase of their programs.

E. Agriculture: Pesticide Control Program

1. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- The Pesticide Bureau has the authority and resources to enforce all federal and state pesticide use laws. Monitoring and evaluation of the appropriate application use of pesticides will continue through DFA's enforcement and compliance assistance efforts.
- Pending adequate funding, six pesticide container collection & recycling events will be held statewide to address water quality concerns associated with the disposals of pesticide containers. These programs will be targeted towards, and made available to all commercial users of pesticides including but not limited to agriculture, landscaping, structural pest control operators and lawn-care operators.
- Pending adequate funding, six waste disposal pesticide container collection events will be held statewide to address water quality concerns associated with the disposal of waste pesticides. These programs will be targeted towards, and made available to all commercial users of pesticides including but not limited to agriculture, landscaping, structural pest control operators and lawn-care operators.
- NRCS, UMASS and DFA will offer technical and financial assistance to farmers seeking to improve systems for mixing, loading and storage of pesticides.
- Workshops and other educational mechanisms will be offered to inform commercial pesticide applicators of Best Management Practices and water quality initiatives on the state and federal level. Offering pesticide recertification credits which applicators must obtain in order to remain licensed will encourage attendance.
- NRCS to continue to provide direct conservation planning assistance through the Conservation Technical Assistance Program (CTA) and the Environmental Quality Incentives Program (EQIP).

F. Agriculture: Assistance Grants

1. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- NRCS will continue to administer the Environmental Quality Incentives Program (EQIP) which offers direct cost-share assistance to producers to install conservation management systems (approx. \$500,000 each year).
- Through 2003, DFA's Agricultural Environmental Enhancement Program (AEEP) will offer grants to farmers to install BMPs on farms (\$200,000 annually for 3 years as provided for in Rivers Protection Act).

Pending adequate funding, DFA will attempt to increase annual amounts and extend the grant program beyond 2003.

- Contingent on funding, DFA will attempt to expand the Agricultural Environmental Enhancement Program beyond 2003.
- DFA, USDA-NRCS and USDA-FSA will continue to explore mechanisms to increase utilization in Massachusetts of USDA's Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP) and the Wildlife Habitat Incentives Program (WHIP).
- DFA, in conjunction with UMASS Extension, USDA Agencies, and other organizations will attempt to secure additional funding to assist farmers with the development and implementation of nutrient management plans.

5. Forestry

A. Forestry: Forest Cutting Practices

1. Long Term (15 Year) Goal:

By 2015, through continued implementation of the Forest Cutting Practices Act and its coordination with the Wetlands Protection Program performance standards, and pro-active education on efforts such as forestry BMPs, less than 5 % of water resources will be assessed as non-supporting and no wetland enforcement orders will be issued due to forestry operations.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- DEM to continue to offer programmatic technical assistance and outreach efforts to the forest cutting community. Since 1984, DEM reviews an annual average of 763 forest cutting plans, making comments, revisions, and modifications as necessary. DEM service foresters make routine site and operation checks.
- DEM to conduct another workshop series on the MGL c.132 regulations with emphasis on forestry BMPs across the state each spring in cooperation with staff from other state agencies, UMASS extension, Forest Products Marketing and Development Center at Mt. Wachusett Community College, forestry consultants and loggers. A workshop will be held in each service forester district (14 in number) in a twilight format in order to make it more convenient for people to fit it in with their normal work schedule. This workshop provides 3 continuing education credits toward the 9 hours that are required over a 3-year period for timber harvester licensing.
- The web site for DEM will be updated to improve the quality of information on a continuing basis and will include information on forestry regulations, program information and availability of technical assistance.
- DEM to issue publication entitled Forest Resources in Massachusetts containing an A-Z description of the Massachusetts forest resource in spring 2000.
- DEM to start development of a 5-year Strategic State Forest Resource Plan in mid 2000. This plan will identify many forest resource issues including NPS.
- DEM plans to develop a BMP effectiveness monitoring procedure in order report statistically on the various BMPs used. DEM will look at all the cutting plans (operations) from beginning to end with final sign-off and compile a statistical report to evaluate the effectiveness of specific BMPs. DEM is working with the U.S Forest Service on this project and will seek funding sources (319 grant) to run a pilot.
- DEM to use existing video footage to develop a training video on forestry BMPs. By 2001, the video project should be complete. EOEA funds will be sought.
- DEM will reprint the forestry BMP manual (third reprint).
- In 2001 or 2002, DEM will initiate rewrite the BMP manual to incorporate new or refined forestry BMPs.
- MDC to continue to provide 100% funding for writing 10-year Forest Stewardship and Chapter 61 plans on privately held watershed properties, to improve the likelihood these properties will remain forested, and will be properly managed. 3,036 acres have been incorporated to date.
- MDC to promote voluntary replacement of petroleum-based logging equipment fluids (e.g. bar and chain oil) with vegetable-oil (canola) based substitutes. MDC requires that all timber harvesting machinery be

equipped with a minimum square footage of petroleum-absorbing "spill cloth", to limit pollution associated with machine failures.

- MDC to enforce through harvesting contracts the listing of all common timber harvesting equipment and the ground pressure and total widths associated with this equipment, based on specific tire sizes and overall machine weight (wide tires produce lower ground pressure but increase machine width). This chart is used to synchronize logging equipment with site sensitivity (e.g. ground pressure limits based on the ability of soils to support equipment, and width limits to reduce residual tree damage in tight stands).
- MDC to continue to implement enhanced road building and maintenance practices for all timber access roads in order to reduce the erosion of sediments from these un-vegetated surfaces. Practices include the use of retention and detention basins, geotextiles, silt fences, haybales, seeding, and water release contouring.
- MDC to continue to review proposed timber harvesting areas in order to reduce the impacts of that harvesting on the identified and mapped vernal pools (more than 400), rare and unusual habitats (about 30), and rare plant populations, and inventory of all historic and potential prehistoric cultural sites of significance.
- MDC to continue to operate forestry activities on the Quabbin watershed as "Green Certified". MDC's Quabbin operations were the first public property to receive this designation after an intensive review by the SmartWood certifying branch of the National Wildlife Federation.
- UMass Extension Service to provide coordinated support and assistance on the revision and rewrite of the state forestry BMP manual.
- UMass Extension Service to continue to provide hands-on technical assistance and education as requested and needed.

6. Hydromodification

A. Hydromodification: Channelization and Channel Modification Wetlands Protection Program, Chapter 91 Program, MCZM Dredging Program

1. Long Term (15 Year) Goal:

Continue to implement the Wetland Protection Program performance standards, Chapter 91 permits and licensing, and 401 Water Quality Certification to prevent or minimize impacts from channelization, stream and coastal bank hardening, and channel dredging. Maximize opportunities for restoration of coastal and riparian habitat.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Regulatory committee to revise Dredged Material Management regulations (310 CMR 9.00)
- Development of comprehensive Dredged Material Management Guidance document and innovative web site.
- Early resource identification and location through interactive GIS-based marine Resource Characterization tools.
- Continue joint-processing (federal and state agencies) pre-application meetings and guidance for all channel and dredging modification project.
- Federal and state agency personnel technical coordination and education meetings.
- Public meetings and outreach efforts for state Designated Port Areas.
- Contingent on funding, another round of Riverfront Protection Act workshops will be developed and implemented.

B. Hydromodification: Erosion & Sediment Control from Dams Dam Safety Program

1. Long Term (15 Year) Goal:

Continue to implement the Dam Safety Program's erosion control provisions for slopes, embankments, and crests of existing and new dams to prevent these structures from becoming sources of NPS pollution.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Continue implementation of state MGL c. 253 licensing provisions and protocols. All projects (new, reconstruction, or repair) require strict erosion and sedimentation controls.
- In-water siltation controls are also mandatory requirements for all projects (new, reconstruction, or repair).
- DEM Dam Safety staff inspect existing dams according to the schedule below depending on their status or if a complaint or concern has been registered, staff inspect immediately:
 - ✓ High hazard: every 2 years
 - ✓ Medium hazard: every 5 years
 - ✓ Low hazard: every 10 years

7. Wetland Restoration and Assessment

A. Wetland Restoration and Assessment: Wetland Restoration Efforts

1. Long Term (15 Year) Goal:

By 2010, restore 3,000 acres of Massachusetts's inland and coastal wetlands. By 2015, restore 5,000 acres of Massachusetts's wetlands.

2. Actions/Implementation Efforts (to 2005):

The following benchmarks and actions are anticipated:

- Complete 10 watershed wetlands restoration plans identifying priority restoration sites in 10 watersheds.
- Complete inventories of the entire Massachusetts coastline to identify tidally restricted salt marshes.
- Continue to work with Massachusetts Audubon Society, Coastal Zone Management, ACEC Program, and other partners to develop a restoration plan and to promote restoration of salt marshes in the Great Marsh.
- Continue to identify and support wetland restoration projects under the GROWetlands (Groups Restoring Our Wetlands) Initiative. Under this program, WRBP provides technical, fundraising, and other support to local and other project sponsors.
- Maintain an active working relationship with our Coastal America partners under the "Resolution to Restore Massachusetts Wetlands" (a Coastal America agreement signed in 1994). Engage federal agencies as partners on specific projects as appropriate.
- Continue to manage the Massachusetts Corporate Wetlands Restoration Partnership, which brings corporate cash and in-kind services support to wetland restoration projects.
- Continue to establish protocols for project monitoring and report results of both projects and the program overall.
- In order to increase understanding of restoration project results and the functions of restored wetlands and to improve restoration techniques, we will build working relationships with academic institutions to establish research projects at selected wetland restoration sites.
- Continue to build a strong education and outreach program to ensure broad public understanding of and support for wetland restoration.

B. Wetland Restoration and Assessment: Wetland Assessment

1. Long Term (15 Year) Goal:

By 2015, ecological assessment methodologies for salt marsh wetlands and freshwater herbaceous and shrub marshes will be fully developed and utilized by state planning groups, regional non-profits and volunteers, and local officials as an effective tool for identifying wetland sites requiring remediation/restoration, evaluating the success of restoration projects, inventorying subwatersheds or land holdings, and for piloting wetlands bio-criteria.

2. Actions/Implementation Efforts (to 2005)

The following benchmarks and actions are anticipated:

- Continue work on EPA Region I Pilot: Cape Cod Bay Salt Marsh Assessment Project to refine methodologies for salt marshes degraded by proximate land use and tidal restrictions. Indicators include aquatic macro-invertebrates, vegetation, birds, fish, pore and surface water chemistry, and hydrology.
- Develop and test indicator protocol for fish or other motile animalia for addition as a viable and effective component of the salt marsh assessment toolbox.
- Continue to engage volunteers in the use and application of the wetland assessment methodologies.
- Through the North Shore Volunteer Wetland Health Project continue to refine the volunteer training modules and handbook.
- Represent MCZM on EPA's New England Biological Assessment of Wetlands Workgroup.
- Present papers and give presentations as necessary/requested.
- Explore and engage in new opportunities for the utilization of the wetland assessment methodologies.

VI. MAJOR ACCOMPLISHMENTS

In any program which generally purports to accomplish certain objectives through an implementation strategy it is worthwhile to take measure of those accomplishments. It has been a little over one decade since the Nonpoint Source Program really began in earnest. There have been many major accomplishments in the nonpoint source sphere since the development and approval of the original Management Plan. Most all of these are described in the NPS Management Plan but it would seem appropriate to list and briefly describe them here for easy reference. The term "major" is used here to denote a significant new law, regulation, program or policy which is expected to have a lasting impact on the prevention and control of nonpoint source pollution. The accomplishments are listed in no particular order which may reflect on their relative importance.

A. Creation and Implementation of the Watershed Initiative

The creation of the Watershed Initiative is a deliberate and formal recognition by EOEa of the importance of managing the state's water resources on a watershed basis. The inclusion of the NPS Program within the Watershed Initiative gives the program greater visibility and an integral role in the watershed approach to controlling and preventing water pollution.

B. Development of a Coastal Nonpoint Pollution Control Plan

The development and implementation of this plan will be a major stimulus to the state's NPS Program. The integration of the Coastal Plan into the 319 Management Plan and its application state-wide is considered significant. The inclusion, adoption and implementation of enforcement provisions contained in the Coastal Plan will lend the NPS Program greater credence and ensure greater success with the implementation of the 319 Management plan.

C. Title 5 Revisions

The 1994 revisions to the regulations governing the subsurface disposal of sanitary sewage will have a major and positive long lasting impact on nonpoint source pollution to groundwater.

D. Watershed Protection Act of 1992

The primary goal of the Act is to improve watershed protection around the Metropolitan Boston reservoir system. (A detailed description of this Act was presented in the 1994 update of the NPS Management Plan).

This Act will have far-reaching impacts on watershed protection of water supplies on a state-wide basis.

E. Phosphorus Control Act

In July of 1993 "An Act Relative to Environmental Protection By Ensuring A Safe Water Supply For Drinking And Other Purposes" was signed into law. This law prohibits the sale of household cleansing products which contain phosphorus concentrations in excess of trace amounts in Massachusetts after July 1, 1994. The Act also limits the phosphorus content of certain commercial cleansing products to 8.7 percent by weight expressed as elemental phosphorus. This legislation will have a significant and long-lasting impact on controlling eutrophication of the waters of the Commonwealth through the reduction of phosphorus from septic system and wastewater treatment plant effluents.

F. Forestry Generic Environmental Impact Report (GEIR)

This major document and the resultant actions resulting therefrom are expected to yield major benefits from the further control of nonpoint sources from silvicultural activities state-wide.

G. Road Deicing Generic Environmental Impact Report (GEIR)

This major document is expected to result in greater protection of water supplies from the impact of road deicing chemicals. The Highway Department recommends the implementation of BMP's within well-head protection zones to protect water supplies.

H. Cape Cod Commission

The creation of this Commission with authority to control certain major developments on Cape Cod for the purpose of protecting the ground and surface waters from nonpoint sources of pollution is a significant achievement.

I. The Bay Programs

The approval of the Buzzards Bay Program and Massachusetts Bays Program is and will continue to have long-lasting beneficial impacts from the control of nonpoint source pollution in their respective watersheds. These are major programs which have specific implementation strategies to address NPS pollution and the protection of the natural resources in their areas.

J. Mega Manual

The development, publication and distribution of this municipal nonpoint source management manual was a major accomplishment. It has been sent to every municipality in the state for the purpose of assisting local authorities to understand nonpoint source pollution and help them implement measures to control and prevent it at the local level. Coupled with an aggressive outreach program this manual should have a long-lasting impact on protecting the water resources of the state.

K. Stormwater Management Manual

This manual, a companion to the Mega Manual, sets force minimum performance standards and detailed design criteria for stormwater best management practices. This manual is expected to have widespread application by municipal and state authorities in the control and prevention of nonpoint source pollution from stormwater.

L. River Protection Act – 1996

This Act affords a far greater degree of protection to the state's rivers and streams by doubling the protective zone from 100 to 200 feet.

M. Eutrophication and Aquatic Plant General Environmental Impact Report (GEIR)

The intent of this document is to provide guidance to lake and pond managers, conservation commissions, and citizens concerned with lake management issues and to provide a basis for more consistent and effective lake management in the state

VII. FUNDING/COMMUNITY RESOURCES

The original Nonpoint Source Management Plan identified several funding sources potentially available to implement the various short and long-term strategies presented in the plan. For each particular strategy a specific funding source was identified and, where appropriate, the necessary funding level was indicated. A different approach has been used in the updated edition of the Management plan to better target sources of funding for addressing nonpoint source pollution and community planning. Since, by definition, nonpoint source pollution is “pollution of surface water or groundwater supplies originating from land-use activities and or the atmosphere”, a key element of preserving and cleaning up our impaired waters across the Commonwealth will be contingent upon our local communities ability to effectively manage future growth and development.

This section of the manual provides two funding tables of available funding resources to assist local officials and community stakeholders. The first table highlights specific programs available for addressing nonpoint sources of pollution, along with a corresponding “Reference #” which provides specific program and contact information. The second table provides a listing of community funding resources available for managing local growth and development, while preserving and protecting our natural resources. A corresponding program “Reference #” is also linked to specific program information, following the tables. In addition, a broad range of technical assistance resources is provided to assist communities in resource protection and community planning and development. Although some of these references may seem unrelated to nonpoint source pollution, we believe that proper environmental planning should begin with the first steps toward any community’s revitalization or economic expansion. By designing best management practices (BMP’s) into the very fabric of any economic development project, then the end result will be environmentally safe and friendly.

Having stated this, we strongly encourage every municipality that plans any economic revitalization or redevelopment project, as well as any new economic development project, to use these references together to incorporate best management practices (BMP’s) into the project from the ground up.

We would also like to draw your attention to some of the self-help grant writing programs on the internet that may be of help to both the novice and experienced grant writer:

<http://www.epa.gov/seahome/grants/src/grant.htm>

http://www.rivernetwork.org/library/libfun_faf99writ.cfm

VII. FUNDING/COMMUNITY RESOURCES

A. NONPOINT SOURCE FUNDING

Reference #	FUNDING PROGRAM/ASSISTANCE	AGENCY	Agriculture BMPs*	Urban Runoff BMPs	Landfill BMPs	Brownfields	Underground Storage Tanks	Septic Systems	Forestry	Marinas/ Boating	Planning, Design, Assessment
33	Agricultural Environmental Enhancement Program (AEEP)	DFA	X								
34	Agricultural Preservation Restriction Program (APR)	DFA	X								
35	Farm Viability Program	DFA	X								
36	ARGO Environmental Technology Fund	DFA	X								
37	Environmental Quality Incentive Program (EQIP)	NRCS	X								
38	Emergency Watershed Program (EWP)	NRCS	X	X							
40	Forestry Incentives Program (FIP)	NRCS							X		
41	Conservation Reserve Program (CRP)	NRCS	X	X							
42	Farmland Protection Program (FPP)	NRCS	X						X		
43	Flood Risk Reduction Program (FRR)	NRCS	X								
44	Watershed Surveys and Planning	NRCS									X
45	Resource Conservation & Development Program (RC&D)	NRCS									X
46	Stewardship Incentives Program (SIP)	NRCS							X		
47	Watershed Operations – Small Watershed Program	NRCS	X	X					X		
1	Section 319 Nonpoint Source Grant Program (319)	DEP	X	X	X	X	X	X			
2	Clean Water State Revolving Fund (CWSRF)	DEP	X	X	X	X	X	X			X
4	Water Quality Management Planning Grant (604b)	DEP									X
5	Community Septic Management Program	DEP						X			
8	Wetlands And Water Quality Grant Program 104(b)(3)	DEP		X	X	X					
9	Research And Demonstration Grant Program	DEP									X
10	Source Water Protection Program (SWAP)	DEP	X	X	X	X	X	X			
11	Well Head Protection Grant Program	DEP	X	X	X	X	X	X			X
7	Municipal Recycling Incentive Program (MRIP)	DEP			X						
6	Municipal Recycling Grant	DEP			X						
14	Watershed Initiative: Volunteer Monitoring Grant	EOEA									X
55	Chelsea Center for Recycling and Economic Development	CRED			X						
31	Coastal Pollution Remediation Grant Program (CPR)	CZM		X						X	X
50	Clean Vessel Act Grant	DFW								X	
29	Forest Stewardship Program	DEM							X		
57	Transportation Enhancement Funds	MHD		X							
77	Homeowner Septic Management Program	MHFA						X			
51	Brownfields Economic Redevelopment Initiative	EPA				X					

A. NONPOINT SOURCE FUNDING
(Continued)

Reference #	FUNDING PROGRAM/ASSISTANCE	AGENCY	Agriculture BMPs*	Urban Runoff BMPs	Landfill BMPs	Brownfields	Underground Storage Tanks	Septic Systems	Forestry	Marinas/ Boating	Planning, Design, Assessment
53	Recycling Loan Fund	MBDC			X						
54	Brownfields Redevelopment Access To Capital	MBDC				X					
56	Predevelopment Assistance	MDFA				X					
75	Office of Brownfields Revitalization	Governor				X					
74	Underground Storage Tank Program	DOR					X			X	
76	Brownfields Redevelopment fund	MA-DEV				X					

*Best Management Practice

VII. FUNDING/COMMUNITY RESOURCES

B. COMMUNITY FUNDING

Reference #	FUNDING PROGRAM/ASSISTANCE	AGENCY	Community Planning/Development	Watershed Planning/Implementation	Water Pollution Abatement	Drinking Water Protection	Open Space Protection	Recreational Access	Environmental Education
12	Executive Order 418 – Community Development Planning	EOEA, DHCD, EOTC	X	X			X		
13	Watershed Initiative: Watershed Stewardship Program	EOEA		X			X	X	X
15	Watershed Initiative: Communities Connected by Water Program	EOEA		X					X
14	Watershed Initiative: Volunteer Monitoring Grants	EOEA		X					X
16	Watershed Initiative: Outdoor Class Room Program	EOEA							X
20	Division of Conservation Services: Self-Help Program	EOEA					X		
21	Division of Conservation Services: Urban Self-Help Program	EOEA					X		
17	Planning for Growth Grants	EOEA	X						
18	GROWetlands Grant Program	EOEA		X			X		
19	Corporate Wetlands Restoration Program	EOEA		X			X		
3	Drinking Water State Revolving Fund	DEP				X			
1	Section 319 Nonpoint Source Grant Program (319)	DEP		X	X				
2	Clean Water State Revolving Fund (CWSRF)	DEP		X	X				
4	Water Quality Management Planning Grant (604b)	DEP		X	X	X			
8	Wetlands And Water Quality Grant Program 104(b)(3)	DEP		X		X			
9	Research And Demonstration Grant Program	DEP		X					
10	Source Water Protection Program (SWAP)	DEP		X		X			X
11	Well Head Protection Grant Program	DEP		X		X			X
22	Lake and Pond Grant Program	DEM		X				X	X
23	Recreational Trails Program	DEM						X	
24	Greenways And Trail Demonstration Grant	DEM						X	
25	Coastal Access Grant Program	DEM						X	X
26	Urban Forest Planning And Education Grant	DEM					X		X
27	Mass Reforest Program	DEM					X		X
28	Forest Stewardship Program	DEM		X			X	X	
29	Heritage Tree Grants	DEM						X	
30	Historic Landscape Preservation Grant Program	DEM						X	X
32	Gulf of Maine Council on the Marine Environment	CZM			X				X
34	Agricultural Preservation Restriction Program (APR)	DFA	X	X			X		
33	Agricultural Environmental Enhancement Program (AEEP)	DFA		X					
49	Urban Rivers Small Grant	DFW		X					X
65	Massachusetts Preservation Projects	MHC					X		
62	Massachusetts Environmental Trust	Trust		X				X	
63	Jessie B. Cox Charitable Trust	Trust			X		X	X	X
64	Johanna Favrot Fund	Trust			X		X	X	X

VII. FUNDING/COMMUNITY RESOURCES

B. COMMUNITY FUNDING (Continued)

Reference #	UNDING PROGRAM/ASSISTANCE	AGENCY	Community Planning/Development	Watershed Planning/Implementation	Water Pollution Abatement	Drinking Water Protection	Open Space Protection	Recreational Access	Environmental Education
67	Community Development Action Grant (CDAG)	DHCD	X		X	X			
68	Community Development Fund	DHCD							
69	Demolition of Abandoned Buildings	DHCD	X						
66	Municipal Incentive Grant	DHCD	X						
70	Community Economic Development Fund	US HHS	X						
71	Community Foundation of Cape Cod	Foundation	X	X					
72	Crossroads Community Foundation	Foundation	X	X					
58	Community Investment	MBDC	X						
59	Mobility Assistance Program	EOTC	X						
60	Public Works Economic Development	EOTC	X						
61	Transportation and Community System Preservation	FHA	X						
56	Predevelopment Assistance	MDFA	X						
73	Rural Business Opportunity Grant	USDA	X						
52	Sustainable Development Challenge	US EPA	X	X				X	X
38	Emergency Watershed Program (EWP)	NRCS		X					
39	Wildlife Habitat Incentives Program (WHIP)	NRCS		X			X		
40	Forestry Incentives Program (FIP)	NRCS		X			X		
41	Conservation Reserve Program (CRP)	NRCS		X			X		
42	Farmland Protection Program (FPP)	NRCS		X			X		
43	Flood Risk Reduction Program (FRR)	NRCS		X			X		
44	Watershed Surveys and Planning	NRCS		X			X		
45	Resource Conservation & Development Program (RC&D)	NRCS	X	X			X		
46	Stewardship Incentives Program (SIP)	NRCS		X			X		
47	Watershed Operations – Small Watershed Program	NRCS		X	X	X	X		
48	Wetlands Reserve Program (WHP)	NRCS		X			X		

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

Ref. # 1. **Section 319 Nonpoint Source Pollution Grants**

Contact: Jane Peirce: (508) 767-2792, e-mail: jane.peirce@state.ma.us

For project development assistance, contact DEP's Regional Nonpoint Source Coordinators:

Brian Duval, Central Regional Office	(508) 849-4027, e-mail: brian.duval@state.ma.us
Rosalia Barber, Northeast Regional Office	(978) 661-7816, e-mail: rosalia.barber@state.ma.us
Jeffrey Brownell, Southeast Regional Office	(508) 946-2702, e-mail: jeffrey.brownell@state.ma.us
Tracey Miller, Western Regional Office	(413) 755-2162, e-mail: tracey.miller@state.ma.us

Summary: To control nonpoint sources of water pollution, particularly from urban runoff, paved surfaces, and other areas where rainwater collects pollutants as it runs over the land.

Eligibility: Any interested public or private organization.

Match: 40% non-federal match of total project cost. In-kind services eligible for match.

\$ Range: \$20,000 to \$200,000

Examples: This program funds: sub-watershed and inlake projects that address all major nonpoint sources affecting water quality in a waterbody; demonstrations of new or innovative best management practices (BMP's), technologies or institutional approaches to controlling nonpoint source pollution; groundwater projects that target high priority nonpoint source groundwater problems; and watershed resource restoration projects that restore vegetated wetlands, lakes, rivers, streams, estuaries, shorelines, riparian areas, seagrass beds and other aquatic habitats.

Schedule: An annual Request for Response (RFR) for project solicitation is issued around March 1, with proposals due to DEP around May 1. Contact DEP's Regional Nonpoint Source Coordinators for assistance.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. #2. Massachusetts Clean Water State Revolving Fund Program

Contact: Steven McCurdy (617) 292-5779, e-mail: steven.mccurdy@state.ma.us or
Glenn Gilmore (617) 292-5754, e-mail glenn.gilmore@state.ma.us

For project development assistance, contact DEP's Regional Municipal Services Director at :

Paul Anderson, Central Regional Office (508) 792-7692, e-mail: paul.anderson@state.ma.us
Thomas Mahin, Northeast Regional Office (978) 661-7600, e-mail: thomas.mahin@state.ma.us
Richard Keith, Southeast Regional Office (508) 946-2784, e-mail: richard.keith@state.ma.us
Deirdre Cabral, Western Regional Office (413) 755-2148, e-mail: deirdre.cabral@state.ma.us

Summary: In an effort to provide incentive to communities to undertake projects with meaningful water quality and public health benefits, this program provides financial assistance to help municipalities and wastewater districts to comply with federal and state water quality requirements. The Program provides subsidized, low-interest loans to finance water quality improvement projects, with particular emphasis on watershed management priorities.

Eligibility: Massachusetts municipalities and waste water districts.

Match: None

\$ Range: Maximum applicants limited to 15-20% of annual program capacity. Annual capacity is approximately \$150 to \$200 million dollars.

Examples: Planning and construction of eligible projects, including new wastewater treatment facilities and upgrades of existing facilities; infiltration/inflow correction; wastewater collection systems; control of combined sewer overflows; and non-point source pollution abatement projects, such as landfill capping, community programs for upgrading septic systems (Title 5), and storm water remediation.

Schedule: Solicitation annually during the summer. Call for more information.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. # 3. Massachusetts Drinking Water State Revolving Fund Program

Contact: Steven McCurdy (617) 292-5779, e-mail: steven.mccurdy@state.ma.us or
Donovan Bowley (617) 292-5523, e-mail: donovan.bowley@state.ma.us

For project development assistance, contact DEP's Regional Municipal Services Director at:

Paul Anderson, Central Regional Office (508) 792-7692, e-mail: paul.anderson@state.ma.us
Thomas Mahin, Northeast Regional Office (978) 661-7600, e-mail: thomas.mahin@state.ma.us
Richard Keith, Southeast Regional Office (508) 946-2784, e-mail: richard.keith@state.ma.us
Deirdre Cabral, Western Regional Office (413) 755-2148, e-mail: deirdre.cabral@state.ma.us

Summary: In an effort to provide incentive to communities to undertake projects with meaningful public health benefits, this program provides financial assistance to help municipalities and public water suppliers to comply with federal and state Safe Drinking Water Act requirements. The Program provides low-interest loans to finance construction or improvement of water treatment facilities, as well as enhancement to distribution systems.

Eligibility: Massachusetts municipalities and community water systems with at least 15 residential connections.

Match: None

\$ Range: For calendar years 1998-2003, up to \$400 million may be available through the loan program.

Examples: Projects include: New and upgraded drinking water treatment facilities; projects to replace contaminated sources, new water treatment, or storage facilities; consolidation or restructuring of water systems: project and system activities that provide treatment, or effective alternatives to treatment, for compliance with regulated health standards, such as the Surface Water Treatment Rule, installation or replacement of transmission or distribution systems.

Schedule: Applications are accepted annually in the late summer / early fall. Call for more information.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. # 4. Section 604(b) Water Quality Management Planning Grants

Contact: Gary Gonyea: (617) 556-1152, e-mail: gary.gonyea@state.ma.us

Summary: Water quality assessment and management planning.

Eligibility: Regional public comprehensive planning organizations such as: regional planning agencies, councils of government, conservation districts, counties, and cities and towns.

Match: Match not required but proposals are enhanced by demonstration of local support.

\$ Range: \$30,000 to \$60,000

Examples: Provide technical assistance to communities for water supply protection and assist local officials in comprehensive water resource planning.

Schedule: Request for Response is issued by DEP each October for competitive projects with proposals due approximately six weeks later. Proposals are evaluated and funding is announced within two months of the proposal submission deadline. Generally, projects are expected to begin approximately eight months after the date of their selection by the Department.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. # 2, 3. Watershed Project Financing and Construction

Contact: Northeast Regional Contact:

Alan Slater (617) 292-5749, e-mail: alan.slater@state.ma.us or
Thomas Mahin (978) 661-7600, e-mail: thomas.mahin@state.ma.us

Southeast Regional Contact:

Robert Cady (617) 292-5713, e-mail: robert.cady@state.ma.us or
Richard Keith (508) 946-2784, e-mail: richard.keith@state.ma.us

Central Regional Contact:

Gustav Swanquist (617) 556-1083, e-mail: gustav.swanquist@state.ma.us or
Paul Anderson (508) 792-7692, e-mail: paul.anderson@state.ma.us

Western Regional Contact:

Stanley Linda (617) 292-5736, e-mail: stanley.linda@state.ma.us or
Deirdre Cabral (413) 784-1100 x2148, e-mail: deirdre.cabral@state.ma.us

Summary: State Revolving Loan Program.

Eligibility: Massachusetts municipalities and wastewater districts.

Match: Loans are subsidized, currently at 50% grant equivalency. (Approximately a no-interest loan.)

\$ Range: In recent years the program has operated at an annual capacity of \$150 to \$200 million per year, representing the financing of 40-50 projects annually.

Examples:

1. Project / Design / Construction of municipal water pollution abatement activities, including wastewater treatment facilities, correction of combined sewer overflows, wastewater collection and transmission facilities, nonpoint source projects (including Title 5), and infiltration/inflow removal.
2. Design and construction of projects to protect or improve public drinking water systems, including filtration, disinfection, and distribution.

Schedule: Calendar Year Basis; applications due October 15.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. # 5. Community Septic Management Program

Contact: **Northeast Regional Office:** Vivek Joshi (978) 661-7742, email: vivek.joshi@state.ma.us
 Central Regional Office: Joanne Kasper-Dunn (508) 792-7653 x3763, e-mail: joanne.kasper@state.ma.us
 Southeast Regional Office: Pamela Truesdale (508) 946-2881, e-mail: pamela.truesdale@state.ma.us
 Western Regional Office: Deirdre Cabral (413) 784-1100 x2148, e-mail: deirdre.cabral@state.ma.us

Summary: Loans for septic system planning and improvements.

Eligibility: Municipalities

Match: None

\$ Range: This program has already undergone two rounds of funding. Every community was given a chance to participate during the years 1996-1998. Currently available option: possible grant (up to \$15,000) to develop a regional or watershed based septic system management plan. Upon completion of the plan the municipality would receive a minimum \$200,000 loan for upgrades. If the community is already participating in the program, and can demonstrate a need for additional funds, then the Regional Coordinator must be contacted through an "Expression of Interest".

Schedule: For new applicants: A two page "Expression of Interest" is required. Call the Regional coordinator for the current schedule.

Ref. # 6. Municipal Recycling Grant Program

Contact: Brooke Nash: (617) 292-5984, e-mail: brooke.nash@state.ma.us or
 Peggy Harlow (617) 292-5861, e-mail: peggy.harlow@state.ma.us

Summary: Recycling equipment, educational materials, and technical assistance grants

Eligibility: Municipalities and regional groups - must provide recycling data sheet and have municipal "Buy Recycled" policy.

Match: Recycling trucks (\$20,000 or trade in of old truck requested)
 Replacement curbside set-out containers (50% match required)
 Recycled paint (50% match required)

\$ Range: No restrictions: During FY 99 grants ranged from \$7 - \$112,654

Examples: Recycling grant items include public education information, set out containers, roll-off containers, recycling trucks, transfer trailers, hazardous household products equipment, recycled products, and technical assistance. New FY99 grant opportunities include storage sheds for collecting mercury-containing products, grants to pay for the recycling of electronics and mercury-containing products, technical assistance to increase participation in recycling programs.

Schedule: The application process begins in July and the submission deadline is in September.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. # 7. Municipal Recycling Incentive Program (MRIP)

Contact: Brooke Nash: (617) 292-5984, e-mail: brooke.nash@state.ma.us or
Joseph Lambert: (617) 574-6875, e-mail: joseph.lambert@state.ma.us

Summary: Performance based grant that awards a per ton payment for primary recyclables collected through municipal programs.

Eligibility: Municipalities and regional groups - must meet minimum recycling criteria and elective criteria every 6 months (criteria are cumulative and increase every 6 months).

Match: None

\$ Range: During FY 98 payments ranged from \$76-\$124,649 (Based upon \$4/ton for drop-off programs and \$8/ton for curbside programs.)

Examples: During FY 99 minimum criteria included: establish a municipal “Buy Recycled” policy and tracking system; establish equal or “parallel” access to both solid waste and recycling collection services; expand recycling access to unserved residents.

During FY 98 elective criteria included: Multiple choices in the areas of recycling access, recycling participation, and recycled product procurement.

Schedule: For past fiscal years, the first phase eligibility deadline was December and the second phase eligibility deadline was May. Call for more information.

Ref. # 8. Wetlands and Water Quality Grant Program 104(b)(3)

Contact: Gary Gonyea: (617) 556-1152, e-mail: gary.gonyea@state.ma.us

Summary: This grant program is authorized under Section 104(b)(3) of the federal Clean Water Act. The goal of this program is to fund projects that address DEP’s water quality and wetland protection goals.

Eligibility: All Massachusetts Environmental Affairs agencies or other organizations with a co-sponsor are eligible. Non-profit organizations such as watershed associations, regional planning agencies, and universities are eligible to submit proposals but only through an EOEAs sponsoring agency.

Match: Proposals submitted must identify a 25% non-federal match (25% of Total Project Cost).

Schedule: Request for Response is issued by DEP each January for competitive projects with proposals due approximately eight weeks later.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. # 9. Research and Demonstration Grant Program

Contact: Arthur Screpetis (617) 767-2875, e-mail: arthur.screpetis@state.ma.us

Summary: This grant program enables the Department of Environmental Protection (DEP) to conduct a program of study and research and demonstration relating to water pollution control and other scientific and engineering studies” so as to insure cleaner waters in the coastal waters, rivers, streams, lakes and ponds of the Commonwealth.”

Eligibility: Unsolicited proposals may be submitted at any time to the DEP, by any interested Massachusetts public or private organization.

Schedule: Unsolicited proposals are accepted anytime. Call for more information.

Ref. # 10. Source Water Protection Program (SWAP)

Contact: Kathleen Romero (617) 292-5727, e-mail: kathleen.romero@state.ma.us

Malcolm Harper (508) 767-2745, email: malcolm.harper@state.ma.us

Chester Masel-Northeast Regional Contact (978) 661-7760, e-mail: chester.masel@state.ma.us

Larry Dayian-Southeast Regional Contact (508) 946-2769, e-mail: larry.dayian@state.ma.us

Paula Caron-Central Regional Contact (508) 767-2719, e-mail: paula.caron@state.ma.us

Douglas Paine-Western Regional Contact (413) 755-2281, e-mail: douglas.paine@state.ma.us

Summary: This grant program provides funds to third party technical assistance organizations that assist public water suppliers in protecting local and regional ground and surface water supplies.

Eligibility: 1. Eligible applicants are third party organizations that have experience providing technical assistance related to drinking water protection.

2. Proposed work must benefit active drinking water sources.

3. The third party must submit letter(s) of support from the public water supplier(s) with the application.

Schedule: Request for Response is issued by DEP each May for competitive projects with proposals due approximately eight weeks later. Call for more information.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
(Continued)

Ref. # 11. Well Head Protection Grant Program

Contact: Catherine Sarafinas (617) 556-1070, e-mail: catherine.sarafinas@state.ma.us
Malcolm Harper (508) 767-2745, email: malcolm.harper@state.ma.us
Chester Masel-Northeast Regional Contact (978) 661-7760, e-mail: chester.masel@state.ma.us
Larry Dayian-Southeast Regional Contact (508) 946-2769, e-mail: larry.dayian@state.ma.us
Paula Caron-Central Regional Contact (508) 767-2719, e-mail: paula.caron@state.ma.us
Douglas Paine-Western Regional Contact (413) 755-2281, e-mail: douglas.paine@state.ma.us

Summary: This grant program provides funds to assist public water suppliers in addressing wellhead protection through local projects and education.

Eligibility: Eligible applicants include all community public water systems, as well as non-transient non-community systems that serve schools. The grant recipient must be a public water system or municipality, and the grant must target an active public water supply source.

Examples: Zone I: Removal or upgrade of potential sources of contamination (for example, underground storage tanks, septic systems, salt storage), wellhead protection signs, and fencing in a pump house.

Zone II: Interim wellhead Protection Area (IWPA): Land must be owned and controlled by water supplier or the municipality.

Containment and improvement projects (secondary containment of liquid hazardous materials, salt/deicing storage, municipal waste management, drainage improvements and hazardous materials storage).

Local town-wide inspection programs for floor drains, underground storage tanks, and hazardous materials.

Schedule: Request for Response is issued by DEP each May for competitive projects with proposals due approximately eight weeks later. Call for more information.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES EXECUTIVE

OFFICE OF ENVIRONMENTAL AFFAIRS (EOEA)

Ref. #12. Massachusetts Executive Order 418-Community Development Planning

On January 21, 2000, Governor Paul Cellucci and Lieutenant Governor Jane Swift issued Executive Order 418, a measure designed to help communities plan for new housing opportunities while balancing economic development, transportation infrastructure improvements and open space preservation. Executive Order 418 directs the Department of Housing and Community Development, the Executive Office of Environmental Affairs, the Executive Office of Transportation and Construction and the Department of Economic Development to provide assistance to cities and towns for community planning. The order makes available up to \$30,000 in planning services to each of the 351 cities and towns in Massachusetts for the creation of a Community Development Plan.

Contact your area Watershed Team Leaders, Watershed Associations and Regional Planning Agencies for more information.

Watershed Team Leaders

Basin	Team Leader	Phone	E-Mail
Blackstone	Lynne Welsh	508-835-4816 x 503	lynne.welsh@state.ma.us
Boston Harbor	Kwabena Kyei-Aboagye	617-626-1165	kwabena.kyei-aboagye@state.ma.us
Buzzards Bay	David Janik	508-946-8990	david.janik@state.ma.us
Cape Cod	Patti Kellogg	508-457-0648	patti.kellogg@state.ma.us
Charles	Peter Phippen	617-626-1174	peter.phippen@state.ma.us
Chicopee	Paul Lyons	413-323-8998	paul.lyons@state.ma.us
Connecticut	John O'Leary	413-587-9329	john.oleary@state.ma.us
Deerfield	Christine Duerring	413-773-7899	christine.duerring@state.ma.us
Farmington	Michael Parker	413-532-4450	michael.parker@state.ma.us
French	John Desmond	508-767-2787	john.desmond@state.ma.us
Housatonic	Thomas O'Brien	413-447-9771	thomas.obrien@state.ma.us
Hudson	Thomas O'Brien	413-447-9771	thomas.obrien@state.ma.us
Ipswich	Richard Tomczyk	978-661-7817	richard.tomczyk@state.ma.us
Islands	Patti Kellogg	508-457-0648	patti.kellogg@state.ma.us
Merrimack	William Dunn	508-767-2799	william.dunn@state.ma.us
Millers	Alice Rojko	508-767-2855	alice.rojko@state.ma.us
Mt. Hope/Narragansett	Andrea Langhauser	508-946-2878	andrea.langhauser@state.ma.us
Nashua	Jo Anne Carr	508-835-4816 x501	joanne.carr@state.ma.us
North Coastal	Larry Gil	978-661-7746	larry.gil@state.ma.us
Parker	Richard Tomczyk	978-661-7817	richard.tomczyk@state.ma.us
Quinebaug	John Desmond	508-767-2787	john.desmond@state.ma.us
South Coastal	George Zoto	508-946-2739	george.zoto@state.ma.us
SuAsCo	Michael Flemming	508-835-4816 x502	michael.flemming@state.ma.us
Shawsheen	William Dunn	508-767-2799	william.dunn@state.ma.us
Taunton	Patrick Rogers	508-946-2836	patrick.rogers@state.ma.us
Ten Mile	Andrea Langhauser	508-946-2878	andrea.langhauser@state.ma.us
Westfield	Michael Parker	413-532-4450	michael.parker@state.ma.us

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (EOEA)
(Continued)

Ref. #12. Massachusetts Executive Order 418-Community Development Planning (Continued)

Community Preservation Contacts:

Priscilla Geigis, Director of Community Preservation (617) 626-1131 or priscilla.geigis@state.ma.us
Betsy Shure Gross, Special Assistant for Community Preservation (617) 626-1117 or betsy.shuregross@state.ma.us
James Hunt, Director of External Relations (617) 626-1111 or james.hunt@state.ma.us
Christian Jacqz, Director of Mass GIS (617) 727-5227 x309 or christian.jacqz@state.ma.us
Jane Pfister, Acting Program Coordinator of Mass GIS (617) 727-5227 x323 or jane.pfister@state.ma.us
Kurt Gaertner, Director of Growth Planning (617) 626-1154 or kurt.gaertner@state.ma.us
John Hultgren, Assistant Director of Growth Planning (617) 626-1153 or john.hultgren@state.ma.us
Jamie Hellen, Community Preservation Outreach Coordinator (617) 626-1054 or jamie.hellen@state.ma.us

Ref #13. Watershed Initiative: Watershed Stewardship Program

Contact: John Clarkeson (617) 626-1159 or john.clarkeson@state.ma.us

Summary: EOEa seeks proposals from qualified organizations, as an independent contractor, that accomplish one or more of the objectives stated in the Open Space Bond Bill. These are 1) restoration of sites; 2) research 3) environmental improvements; 4) recreational improvements. Each proposed activity must meet one or more of these objectives. The Watershed Stewardship Program, administered by the Massachusetts Watershed Initiative (MWI), is intended to support these objectives in the context of the Initiative. The MWI focuses on creating strong partnerships among state and federal agencies, municipalities, local boards, businesses, watershed and civic associations, regional planning agencies, citizens and others to restore and protect natural resources utilizing a watershed approach. EOEa may give preference to proposals which, in addition to providing the Commonwealth with the best value for the proposed project, also demonstrates the bidder's ability to develop or enhance its position as an organized, sustaining community partner for the Watershed Initiative.

Eligibility: IRS non-profit 501 c(3) organizations, land trusts, conservation districts, counties, cities and towns, and other regional or local planning organizations.

Match: Projects must have a 1:1, dollar-for-dollar non-state match of the total state grant amount. In-kind services are eligible as a cost match.

\$ Range: Individual contracts of up to \$50,000 will be awarded on a competitive basis. In fiscal year 2000 (July 1, 1999 to June 30, 2000) a total of \$200,000 was awarded. The contract shall last for a period of up to 2 years. The contract may be extended at the discretion of EOEa for up to two six-month periods. Funding for Year 2 is contingent upon satisfactory completion of Year 1 tasks.

Schedule: The Request For Response (RFR) is due in the late fall. Please call for more information.

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (EOEA)
(Continued)

Ref. #14. Watershed Initiative: Volunteer Monitoring Grants

Contact: John Clarkeson (617) 626-1159 or john.clarkeson@state.ma.us
Christian Krahforst (617) 626-1216 or christian.krahforst@state.ma.us

Summary: Grants are available to support volunteer groups which monitor inland and coastal systems; to coordinate these efforts with state priority projects under the MWI; and to gather information to support the protection and restoration of important aquatic habitats and natural resources. These funds may be used for marine, estuarine, and freshwater monitoring to better understand the environmental health of our state's 27 watersheds.

There are two types of grant awards:

1. Volunteer Monitoring Grant - To aid in the start-up of volunteer monitoring or to support established volunteer monitoring groups currently active in environmental monitoring in Massachusetts. Grants are awarded based on detailed work plans including schedules for Quality Assurance Project Plans (QAPP) submission (where applicable). This grant may not be used solely for salaries or administrative costs. Outreach expenditures cannot exceed more than 15% of the total award.
2. Project Supply Grant - To purchase project supplies such as but not limited to field and sampling supplies, laboratory testing, and lab supplies.

Eligibility: Both types of volunteer monitoring grants are available to an IRS 501 (c) (3) certified non-profit monitoring group as well as those monitoring groups organized by municipalities or public academic institutions relying on volunteers. Municipal or non-profit labs are also eligible for equipment grants if they submit a joint response with a cooperating volunteer monitoring group.

\$ Range: Type 1 grant recipients may receive up to \$5000.
Type 2 grant recipients may receive up to \$2000.

Schedule: The Request for Response (RFR) goes out periodically. Please call for more information.

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (EOEA)
(Continued)

Ref. #15. Watershed Initiative/Planning for Growth: Communities Connected by Water Program

Contact: John Clarkeson: (617) 626-1175 or john.clarkeson@state.ma.us

Summary: The purpose of this program is to solicit projects that protect watershed resources and plan for sustainable growth. This program recognizes the inherent connection between the resource protection objectives of the Planning for Growth Program and the Watershed Initiative.

Eligibility: Watershed Initiative Segment: watershed organizations, IRS non-profit 501 (c)(3) organizations, regional planning agencies, conservation districts, counties, and cities and towns. Planning for Growth Segment: regional planning agencies acting on behalf of cities and towns, a group of municipalities acting through a lead community.

Match: Watershed Initiative Segment: 100%; at least 50% cash. Planning for Growth Segment: 25%; cash or in-kind.

\$ Range: Watershed Initiative Segment: contracts of up to \$150,000. Planning for Growth Segment: contracts of up to \$100,000.

Examples: Two projects were funded from a recent grant round, "Planning for Growth and Watershed Protection in the Ipswich River Watershed" and "Looking Beyond Devens: Planning for the Future in the Nashua River Watershed Area."

Schedule: The Request for Response (RFR) is issued in January.

Ref. #16. Watershed Initiative/Environmental Education: Outdoor Classroom Program

Contact: Melissa Griffiths (617) 626-1114 or melissa.griffiths@state.ma.us

Summary: Each proposed activity should meet one or more of the following goals while promoting watershed and environmental education in the classroom. The goals, as defined by the Open Space Bond Bill are 1) restoration of sites; 2) research; 3) environmental improvements; 4) recreational improvements.

Eligibility: Outdoor Classroom Grants are available to any municipality, public school, or Massachusetts public institution of higher education.

Match: Not required, but presence of match does strengthen application.

\$ Range: Up to \$1,500.

Examples: Two projects were funded from a recent grant round, "Runoff Monitoring and Reclamation of a Cranberry Bog", and "Identification and Certification of Vernal Pools".

Schedule: Responses are currently reviewed on a monthly basis. Please call for information.

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (EOEA)
(Continued)

Ref. #17. Planning for Growth Grants

Contact: Kurt Gaertner: (617) 626-1154 or kurt.gaertner@state.ma.us

Summary: Comprehensive growth planning for cities and towns and development of regional policy plans.

Eligibility: Municipalities and regional planning agencies.

Match: 25%, can be cash or in-kind.

\$ Range: Up to \$100,000.

Examples: \$80,000 to the towns of Buckland and Shelburne for the completion of an inter-municipal comprehensive plan. \$50,000 to the Berkshire Regional Planning Commission and the Towns of Lee and Lenox for development of a sub-regional growth policy plan.

Schedule: Call for more information.

Wetlands Restoration and Banking Program

Ref. #18. GROWetlands Grant Program

Contact: Christy Foote-Smith: (617) 292-5991 or cfoote-smith@state.ma.us

Summary: The program funds the implementation of “proactive” (not required by a permit or enforcement action) wetlands restoration projects. The program wishes to promote and support wetland restoration projects that have been identified and prioritized through the GROWetland Initiative, inventories it has conducted of degraded salt marshes, and watershed wetland restoration plans it has developed.

Eligibility: Applicants must be public entities, including counties, town authorities, regional government bodies, or any instrumentality of government. The wetland restoration work to be performed must not be for the purpose of providing wetland mitigation required by a permit or enforcement action.

Match: A grant match is not required, but may result in a more competitive project since the proportion of cash and in-kind contributions toward the total project cost is a criterion for evaluating grant proposals.

\$ Range: Although there is no maximum application amount, the total program funds are \$100,000 annually. Proposals fall into two categories, but are judged equally: 1) under \$50,000 and 2) over \$50,000.

Examples: Fundable project costs include: 1) physical activities directly related to wetland restoration such as dredging, filling, ditching, mowing, installation of structures, excavation, planting, grading, and monitoring and 2) the purchase of materials such as culverts, tide gates, and other structures necessary to carry out a successful restoration.

Schedule: All application materials are reviewed by mid-winter annually. Call for more information.

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (EOEA)
(Continued)

Ref. # 19. Corporate Wetlands Restoration Program

Contact: Christy Foote-Smith: (617) 292-5991 or cfoote-smith@state.ma.us

Summary: This program is funded through a public/private partnership between the Massachusetts Executive Office of Environmental Affairs, in partnership with the US Environmental Protection Agency, other Federal Coastal America partners, and the business and non-profit communities to restore wetlands in Massachusetts' 27 major watersheds. This program manages funds and services contributed by corporate partners, using corporate contributions to facilitate design and construction of wetland restoration projects. Participation in this program is voluntary and flexible. The preferred mode of giving is a monetary gift to be allocated to a priority wetland restoration project that has been identified by the Wetlands Restoration and Banking Program and recommended for funding by the Corporate Wetlands Restoration Partnership Advisory Board. Corporate Wetland Restoration Partnership monetary contributions may fund restoration projects in their entirety or may be used to match federal grant awards. Alternatively, monetary or in-kind service donations may be targeted to a specific restoration project or toward development of a wetland restoration plan for a specific watershed.

Eligibility: Unlimited as to applicants. Must be a project that meets Wetland Restoration Banking Program's definition of "wetland restoration".

Match: A grant match is not required, but may result in a more competitive project since the proportion of cash and in-kind contributions toward the total project cost is a criterion for evaluation of grant proposals.

\$ Range: Unlimited.

Examples: Project activities include: 1) physical activities directly related to wetland restoration such as dredging, filling, ditching, mowing, installation of structures, excavation, planting, grading, and monitoring; 2) the purchase of materials such as culverts, tide-gates, and other structures necessary to carry out a successful restoration; and 3) other activities directly related to wetland restoration such as project design and permitting.

Schedule: Applications are accepted year round. Call for more information.

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (EOEA)
(Continued)

Division of Conservation Services

Ref. # 20. Self-Help Program

**** SUBJECT TO HOUSING CERTIFICATION UNDER EXECUTIVE ORDER 418****

Contact: Jennifer Soper: (617) 626-1015 or jennifer.soper@state.ma.us

Summary: Funds for acquiring land for conservation and passive recreation purposes.

Eligibility: Municipal Conservation Commissions (A town must have an state approved Open Space and Recreation Plan to be eligible).

Match: 52-70% grant of total project cost: level of funding dependent upon the equalized valuation per capita decile ranking of the community. Please note that this is a reimbursement program, not a matching grants program.

\$ Range: The Secretary of EOEA announces Maximum Grant award amount at the onset of each grant round.

Examples: Award to Falmouth to purchase coastal pond property adjacent to larger conservation area.

Schedule: The application process begins in the spring with an application deadline of June 1. A new rolling grant round is in development and will be announced by the Secretary of EOEA. Call for more information.

Ref. #21. Urban Self-Help Program

**** SUBJECT TO HOUSING CERTIFICATION UNDER EXECUTIVE ORDER 418****

Contact: Joan Robes: (617) 626-1014 or joan.robres@state.ma.us

Summary: Funds for acquiring land for public outdoor recreation and/or the renovation or development of public outdoor park and recreation facilities.

Eligibility: Municipalities: Town and cities must have a state approved Open Space and Recreation Plan to be eligible.

Match: 52-70% grant of total project cost: level of funding dependent upon the equalized valuation per capita decile ranking of the community. Please note that this is a reimbursement program, not a matching grants program.

\$ Range: The Secretary of EOEA announces Maximum Grant award amount at the onset of each grant round.

Examples: Funds to the City of Cambridge to convert Danehy Park from a 50-acre landfill to playing fields and open space.

Schedule: The application process begins in the spring with an application deadline of June 1. A new rolling grant round is in development and will be announced by the Secretary of EOEA. Call for more information

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (DEM)

Ref. # 22. Lake and Pond Grant Program

Contact: Steve Asen: (617) 626-1353 or steve.asen@state.ma.us

Summary: Lake and Pond protection, preservation, enhancement, and public access.

Eligibility: Municipalities; co-applications are encouraged from Lake and Pond Associations or Districts, and Watershed Associations.

Match: 50% cash match.

\$ Range: \$1,000-\$10,000

Examples: Controlling non-point pollution; eradicating non-native aquatic plant species, developing lake and watershed management plans.

Schedule: In past years, applications were mailed in October and the deadline was December 31. Call for more information.

Ref. # 23. Recreational Trails Program

Contact: Peter Brandenburg: (617) 626-1453 or peter.brandenburg@state.ma.us

Summary: Construction and improvement of publicly accessible recreational trails.

Eligibility: Municipalities, non-profit groups, and regional and state agencies.

Match: 20% minimum, in-kind permitted.

\$ Range: \$2000-\$20,000, exceptions considered.

Examples: Trail building materials; support of volunteer trail maintenance activities.

Schedule: Call for more information.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (DEM)
(Continued)

Ref. # 24. Greenways and Trails Demonstration Grants

Contact: Jennifer Howard: (413) 586-8706 X18; email jennifer.howard@state.ma.us

Summary: Innovative projects that advance the creation and promotion of greenway and trail networks throughout Massachusetts.

Eligibility: Municipalities, regional planning agencies, and non-profit organizations.

Match: None required, although encouraged, including in-kind contributions.

\$ Range: \$1,000 - \$5,000; up to \$10,000 available for multi-town projects.

Examples: Improving access to rivers and trails, producing greenway and trail brochures, maps, signs, and curricula, and involving community members in greenway and trail planning and implementation.

Schedule: Applications are due in fall/winter each year - call for more information.

Ref. # 25. Coastal Access Grants Program

Contact: Department of Environmental Management (617) 626-1250

Summary: Local and regional projects that improve and enhance the general public's recreational access to the coast.

Eligibility: Municipalities, regional planning agencies, and non-profit organizations.

Match: None required, although encouraged.

\$ Range: Currently up to \$5,000 per grant.

Examples: Develop a local public access plan, or a management plan for coastal property; develop a new coastal trail; enhance existing coastal access points; develop coastal access educational initiative.

Schedule: The application deadline is at the end of the calendar year, with awards announced 1-2 months later; projects and final reports must be completed by autumn. Call for exact dates and more information.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (DEM)
(Continued)

Ref. #26. Urban Forest Planning and Education Grants

Contact: Edith Makra: (617) 626-1466 or edith.makra@state.ma.us

Summary: Funds to build support for the protection and management of community trees and forest ecosystems.

Eligibility: Municipalities and nonprofit groups.

Match: 100%, in-kind allowed.

\$ Range: Up to \$10,000

Examples: Tree inventories that involve residents in data collection; hands-on training to students to observe, plant and care for trees; workshops and public awareness campaigns; urban environmental analysis (GIS).

Schedule: Applications are due in mid-April. Call for more information.

Ref. # 27. Heritage Tree Care

Contact: Edith Makra (617) 626-1466 or edith.makra@state.ma.us

Summary: Funds for pruning and maintenance of large or historic public trees.

Eligibility: Municipalities and non-profit groups.

Schedule: Call for more information.

Ref. # 28. Mass ReLeaf Program

Contact: Edith Makra: (617) 626-1466 or edith.makra@state.ma.us

Summary: Funds the purchase of trees for community planting projects by developing partnerships between business, government, and nonprofit groups.

Eligibility: Municipalities, non-profit groups, and community volunteer groups.

Match: 50%, usually in-kind services to plant and maintain trees.

\$ Range: up to \$5000

Examples: Tree planting to reduce energy use, curb the urban heat island effect, and offset urban pollution; educational and promotional events to expand volunteer networks and corporate partners.

Schedule: Grants in early spring and fall when available. Call for more information.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (DEM)
(Continued)

Ref. # 29. Forest Stewardship Program

Contact: Susan Campbell (413) 256-1201 or susan.campbell@state.ma.us

Summary: Grants to private forest landowners to protect forest ecosystems. Landowners, with assistance of DEM foresters, develop a forest stewardship plan for their property, which makes them eligible for Federal cost sharing funds to help carry out the plan.

Eligibility: Any forest landowner in Massachusetts, who meets the following criteria: ownership must be private, non-industrial, and non-profit; and forest land must be less than 1,000 acres in total size in the State.

Examples: Forest stewardship plans and implementation can include any project which meets one of the 9 main goals, such as wildlife habitat management, erosion reduction, protection of endangered species, trail creation/maintenance, and timber quality improvement.

Schedule: Applications were due in March of past years. Call for more information.

Ref. # 30. Massachusetts Historic Landscape Preservation Grant Program

Contact: Katy Lacy: (617) 626-1379 or katy.lacy@state.ma.us

Summary: State-funded competitive grant program to support the preservation and restoration of historic landscapes listed or in certain instances eligible for listing on the National Register of Historic Places.

Eligibility: Applicants must be a municipality.

Match: The Program requires a municipal cash match of no less than 30 percent and no more than 48 percent of the total project.

\$ Range: Up to \$50,000 per year per project.

Examples: Inventory, planning and design activities include the survey of historic landscapes, preservation of historic landscape reports, park user studies etc; construction activities include stabilization, protection, rehabilitation and restoration projects that are consistent with current planning documents; preservation maintenance activities include those cyclic maintenance activities that are essential to the long term protection and preservation of historic fabric and features of site; public education and stewardship activities include workshops, school programs, brochures, signage and interpretive elements.

Schedule: Call for more information.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

OFFICE OF COASTAL ZONE MANAGEMENT (CZM)

Ref. #31. Coastal Pollutant Remediation (CPR) Program

Contact: Jason Burtner (617) 626-1214, e-mail: jason.burtner@state.ma.us

Summary: The CPR program provides competitive grants to municipalities in the Massachusetts coastal watersheds. CPR grant money can be used for construction of stormwater remediation systems, assessment to identify the source(s) of pollution and design remediation systems, and the installation of marine pump-out facilities.

Eligibility: The 221 Municipalities located within the Massachusetts coastal watersheds.

Match: 25% local match, cash or in-kind services

\$ Range: No restrictions; past grants have ranged between \$3,000 to \$167,000. The average project is approximately \$45,000.

Examples: Construction of vegetated wetland swale to mitigate road runoff; innovative proprietary technology stormwater best management practices; assessment grants to develop and design stormwater remediation systems and bay-wide bilge oil sorbent pilot project; boat pump-outs.

Schedule: Annual Request for Response is released in late spring with the deadline in summer.

Gulf of Maine Council on the Marine Environment

Ref. # 32. Non-Profit Organizations Coastal and Marine Environment Grants

Contact: Susan Snow-Cotter (617) 626-1202 or susan.snow-cotter@state.ma.us

Summary: Grants to fund efforts to restore shellfish habitat, restore groundfish resources, identify effects of toxins in marine food chain, reduce marine debris, protect and restore regionally significant coastal habitat.

Eligibility: Nonprofit organizations (e.g. community assoc., civic groups, municipalities, education institutions) in Gulf of Maine Watershed which in Massachusetts extends from Salisbury to Nantucket. (Does not include Buzzards Bay towns).

Match: 50% match requirement. (Half of the match must be in cash.)

\$ Range: \$1,000 - \$10,000

Examples: Outreach materials to support marine debris education. Development of bilingual Citizen's Guide to Protecting Natural Resources of Boston Harbor.

Schedule: Depends on funding availability. Call for more information.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

DEPARTMENT OF FOOD AND AGRICULTURE (DFA)

Ref. # 33. Agriculture Environmental Enhancement Program (AEEP)

Contact: Susan Phinney, Boston (617) 626-1772, e-mail: susan.phinney@state.ma.us
Easthampton (413) 529-0873,
Lancaster (508) 792-7711 x 11;
Massachusetts Farm Bureau (508) 881-4766;
Farm Service Agency field offices (413) 253-4500 for the nearest office;
Natural Resources Conservation Service field office (413) 253-4351 for the nearest office.

Summary: This program is open to producers and growers who farm 5 acres or more in the state of Massachusetts and have the potential to impact water resources. This program reimburses farmers for the cost of their materials for projects that aim to improve water quality. The farmer is responsible for the cost of installing and maintaining the practice.

Eligibility: Farmers owning farms 5 acres or larger. All applicants must have either an updated USDA Natural Resource Plan or a plan from an approved source such as the one in the "On-Farm Strategies To Protect Water Quality" workbook which can be obtained by calling the Massachusetts Department of Agriculture.

\$ Range: The maximum award per project is \$20,000. Up to 75% of the cost will be reimbursed prior to the project's completion for projects over \$5,000.

Schedule: Annual Request for Response (RFR) is issued in August. Please call for more information.

Ref. # 34. Agriculture Preservation Restriction (APR) Program

Contact: Carol Szocik: (508) 792-7712, e-mail: carol.szocik@state.ma.us

Summary: Through the APR Program, the state offers to pay farmers the difference between the "fair market value" and the "agricultural value" of their farmland in exchange for a permanent deed restriction which precludes any use of the property that will have a negative impact on its agricultural viability.

Eligibility: Farmers owning farms 5 acres or larger.

Examples: Since 1980, deed restrictions have been placed on 468 farms totaling approximately 42,000 acres in 130 towns.

Schedule: The program is a rolling application process. If a farmer is interested, the APR Program should be contacted.

DEPARTMENT OF FOOD AND AGRICULTURE (DFA)
(Continued)

Ref. # 35. Farm Viability Program

Contact: Kent Lagee: (413) 529-0873, e-mail: kent.lagee@state.ma.us

Summary: This program's purpose is to improve the economic bottom lines and environmental integrity of participating farms through the development and implementation of Farm Viability Plans. Financial agreements are made with participating farms upon the completion of such a plan which may include either the purchase of an agricultural covenant by the state for a term of 5 or 10 years, or payment for the implementation of the developed Farm Viability Plan.

Eligibility: Farms of 5 acres or larger.

Schedule: Applications are accepted in the spring. Call for more information.

Ref. # 36. Agro Environmental Technology Grant Program

Contact: Craig Richov: (508) 792-7711, e-mail: craig.richov@state.ma.us

Summary: Applied research, demonstration projects, and feasibility analysis which involve new or alternative production, processing, distribution or market access technologies, practices or organizational arrangements.

Eligibility: Public or private agencies or organizations, business and industry, educational institutions and local governments.

Match: Minimum 1:1

\$ Range: Up to \$50,000

Examples: Use of bio-controls for plant pests as an alternative to pesticide use, organizing a marketing cooperative, developing manuals and how to guides for the production of new agricultural or aqua-cultural crops.

Schedule: Annual Request for Response (RFR) released in September, proposals due by December 1st each year.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

NATURAL RESOURCES CONSERVATION SERVICES (NRCS)

451 West Street, Amherst, MA 01002-2995

413-253-4350

www.nrcs.usda.gov

Ref. # 37. Environmental Quality Incentives Program (EQIP)

The Environmental Quality Incentives Program provides technical, educational, and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State, and tribal environmental laws, and encourages environmental enhancement. The program is funded through the Commodity Credit Corporation. The purposes of the program are achieved through the implementation of a conservation plan which includes structural, vegetative, and land management practices on eligible land. Five- to ten-year contracts are made with eligible producers. Cost-share payments may be made to implement one or more eligible structural or vegetative practices, such as animal waste management facilities, terraces, filter strips, tree planting, and permanent wildlife habitat. Incentive payments can be made to implement one or more land management practices, such as nutrient management, pest management, and grazing land management.

Fifty percent of the funding available for the program will be targeted at natural resource concerns relating to livestock production. The program is carried-out primarily in priority areas that may be watersheds, regions, or multi-state areas, and for significant statewide natural resource concerns that are outside of geographic priority areas.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Ref. # 38: Emergency Watershed Program (EWP)

The purpose of the Emergency Watershed Protection program is to undertake emergency measures, including the purchase of flood plain easements, for runoff retardation and soil erosion prevention to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever fire, flood or any other natural occurrence is causing or has caused a sudden impairment of the watershed.

It is not necessary for a national emergency to be declared for an area to be eligible for assistance. The program objective is to assist sponsors and individuals in implementing emergency measures to relieve imminent hazards to life and property created by a natural disaster. Activities include providing financial and technical assistance to remove debris from streams, protect destabilized streambanks, establish cover on critically eroding lands, repairing conservation practices, and the purchase of flood plain easements. The program is designed for installation of recovery measures.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

NATURAL RESOURCES CONSERVATION SERVICES (NRCS)
(Continued)

Ref. # 39 Wildlife Habitat Incentives Program (WHIP)

The Wildlife Habitat Incentives Program provides financial incentives to develop habitat for fish and wildlife on private lands. Participants agree to implement a wildlife habitat development plan and USDA agrees to provide cost-share assistance for the initial implementation of wildlife habitat development practices. USDA and program participants enter into a cost-share agreement for wildlife habitat development. This agreement generally lasts a minimum of 10 years from the date that the contract is signed.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Ref. # 40 Forestry Incentives Program (FIP)

The Forestry Incentives Program (FIP) supports good forest management practices on privately owned, non-industrial forest lands nationwide. FIP is designed to benefit the environment while meeting future demands for wood products. Eligible practices are tree planting, timber stand improvement, site preparation for natural regeneration, and other related activities. FIP is available in counties designated by a Forest Service survey of eligible private timber acreage.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Ref. #41 Conservation Reserve Program (CRP)

The Conservation Reserve Program reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter-strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

NATURAL RESOURCES CONSERVATION SERVICES (NRCS)

(Continued)

Ref. # 42 Farmland Protection Program (FPP)

The Farmland Protection Program provides funds to help purchase development rights to keep productive farmland in agricultural uses. Working through existing programs, USDA joins with State, tribal, or local governments to acquire conservation easements or other interests from landowners. USDA provides up to 50 percent of the fair market easement value. To qualify, farmland must: be part of a pending offer from a State, tribe, or local farmland protection program; be privately owned; have a conservation plan; be large enough to sustain agricultural production; be accessible to markets for what the land produces; have adequate infrastructure and agricultural support services; and have surrounding parcels of land that can support long-term agricultural production. Depending on funding availability, proposals must be submitted by the government entities to the appropriate NRCS State Office during the application window.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Ref. # 43 Flood Risk Reduction Program (FRR)

The Flood Risk Reduction Program was established to allow farmers who voluntarily enter into contracts to receive payments on lands with high flood potential. In return, participants agree to forego certain USDA program benefits. These contract payments provide incentives to move farming operations from frequently flooded land.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Ref. # 44 Watershed Surveys and Planning

The purpose of the program is to assist Federal, State, and local agencies and tribal governments to protect watersheds from damage caused by erosion, floodwater, and sediment and to conserve and develop water and land resources. Resource concerns addressed by the program include water quality, opportunities for water conservation, wetland and water storage capacity, agricultural drought problems, rural development, municipal and industrial water needs, upstream flood damages, and water needs for fish, wildlife, and forest-based industries.

Types of surveys and plans include watershed plans, river basin surveys and studies, flood hazard analyses, and flood plain management assistance. The focus of these plans is to identify solutions that use land treatment and nonstructural measures to solve resource problems.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

NATURAL RESOURCES CONSERVATION SERVICES (NRCS)
(Continued)

Ref. # 45 Resource Conservation & Development Program (RC&D)

The purpose of the Resource Conservation and Development (RC&D) program is to accelerate the conservation, development and utilization of natural resources, improve the general level of economic activity, and to enhance the environment and standard of living in authorized RC&D areas. It improves the capability of State, tribal and local units of government and local nonprofit organizations in rural areas to plan, develop and carry out programs for resource conservation and development. The program also establishes or improves coordination systems in rural areas. Current program objectives focus on improvement of quality of life achieved through natural resources conservation and community development which leads to sustainable communities, prudent use (development), and the management and conservation of natural resources. Authorized RC&D areas are locally sponsored areas designated by the Secretary of Agriculture for RC&D technical and financial assistance program funds. NRCS can provide grants for land conservation, water management, community development, and environmental needs in authorized RC&D areas.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Ref. # 46 Stewardship Incentives Program (SIP)

The Stewardship Incentive Program provides technical and financial assistance to encourage non-industrial private forest landowners to keep their lands and natural resources productive and healthy. Qualifying land includes rural lands with existing tree cover or land suitable for growing trees and which is owned by a private individual, group, association, corporation, Indian tribe, or other legal private entity. Eligible landowners must have an approved Forest Stewardship Plan and own 1,000 or fewer acres of qualifying land. Authorizations may be obtained for exceptions of up to 5,000 acres.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Ref. # 47 Watershed Operations --Small Watershed Program and Flood Prevention Program (WF 08 or P03)

The Small Watershed Program works through local government sponsors and helps participants solve natural resource and related economic problems on a watershed basis. Projects include watershed protection, flood prevention, erosion and sediment control, water supply, water quality, fish and wildlife habitat enhancement, wetlands creation and restoration, and public recreation in watersheds of 250,000 or fewer acres. Both technical and financial assistance is available.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

NATURAL RESOURCES CONSERVATION SERVICES (NRCS)
(Continued)

Ref. # 48 Wetlands Reserve Program (WRP)

The Wetlands Reserve Program is a voluntary program to restore wetlands. Participating landowners can establish conservation easements of either permanent or 30-year duration, or can enter into restoration cost-share agreements where no easement is involved. In exchange for establishing a permanent easement, the landowner receives payment up to the agricultural value of the land and 100 percent of the restoration costs for restoring the wetlands. The 30-year easement payment is 75 percent of what would be provided for a permanent easement on the same site and 75 percent of the restoration cost. The voluntary agreements are for a minimum 10-year duration and provide for 75 percent of the cost of restoring the involved wetlands. Easements and restoration cost-share agreements establish wetland protection and restoration as the primary land use for the duration of the easement or agreement. In all instances, landowners continue to control access to their land.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

DEPARTMENT OF FISHERIES, WILDLIFE, AND ENVIRONMENTAL LAW ENFORCEMENT (DFWELE)

Ref. # 49. Urban Rivers Small Grants

Contact: Joan Kimball: (617) 626-1544 or joan.kimball@state.ma.us

Summary: For projects that seek to restore urban rivers.

Eligibility: Municipalities and non-profit groups located in urbanized areas.

Match: No match requirement.

\$ Range: \$3,000 - \$8,000

Examples: First year grants.

Schedule: Call for more information.

Ref. # 50. Clean Vessel Act Grants

Contact: Buell Hollister: (617) 626-1524 or buell.hollister@state.ma.us

Summary: Funds boat pump-out facilities and dump stations for the proper disposal of sewage from recreational boats.

Eligibility: Municipalities, and private marinas with the support of municipalities.

Examples: A fixed station attached to a dock where boats can be serviced or a boat equipped with a pump-out which services boats while attached to a mooring.

Schedule: Call for more information.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

ENVIRONMENTAL PROTECTION AGENCY (EPA)

Ref. #51. Brownfields Economic Redevelopment Initiative

One Congress St, Boston, MA 02114
617-573-9681 - www.epa.gov/swerosps/bf/html-doc/region01.htm

Provides \$200,000 over 2 years for a project involving site assessment, site identification, or remediation planning for Brownfields. Activities can include administration, outreach to stakeholders, and field work.

Ref. # 52. Sustainable Development Challenge

One Congress St, Boston, MA 02114
888-372-7341- www.epa.gov/region01/eco/grants/sustaing.html

Aims to encourage communities to work with businesses and government to develop flexible, locally-oriented approaches that link environmental quality management with sustainable development and revitalization. An example is working with local businesses to develop a comprehensive system for solid waste reduction/reuse/recycling in conjunction with rehabilitating buildings, facades, streetscapes, etc.

MASSACHUSETTS BUSINESS DEVELOPMENT CORPORATION (MBDC)

Ref. # 53. Recycling Loan Fund

50 Milk St, Boston, MA 02109
617-350-8877 - www.mass-business.com/site/content/recycling.asp

Recycling businesses of any size located in Massachusetts whose activities add economic value to non-hazardous materials are eligible for loans ranging from \$50,000 to \$300,000. Loans can be used for "reasonable business purposes."

Ref. # 54. Brownfields Redevelopment Access to Capital

50 Milk St, Boston, MA 02109
617-350-8877 - www.mass-business.com/site/content/brownfields.asp

A state-subsidized program which will back cleanup loans by themselves or in conjunction with development or redevelopment loans for business purposes on contaminated sites with environmental insurance and loan guarantees. Provides: broad environmental insurance coverage on projects for lender and borrower, including cost-cap, at subsidized rates; pre-negotiated, low cost policies, with a menu of additional coverage; project loan guarantees for the lender; minimal paperwork or delays for the loan officer and borrower.

Ref. # 58. Community Investment

50 Milk St, Boston, MA 02109
617-350-8877- www.mass-business.com/site/content/community.asp

Provides direct funding to minority, women and disadvantaged businesses, non-profits, and other organizations. Loan requests will be considered for up to \$1,000,000 for working capital, acquisition of assets, and restructuring of debt.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

CHELSEA CENTER FOR RECYCLING & ECONOMIC DEVELOPMENT (CRED)

Ref. # 55. Recycling-Based Community Economic Development
80 Second Street, Chelsea, MA 02150
617-887-2300 - www.chelseacenter.org

Aims to help communities explore ways to expand the economic base by taking advantage of the hidden value in municipal solid waste. The program funds such activities as updating the municipal economic development plan, identifying potential sources and uses of waste materials, starting up a small recycled products manufacturing business, and working with the community to determine recycled product manufacturers appropriate for the area.

MASSACHUSETTS DEVELOPMENT FINANCE AGENCY (MDFA)

Ref. # 56 Predevelopment Assistance
75 Federal St, Boston, MA 02110
West: 413-731-8848;
Central: 978-772-6340;
All Others: 617-451-2477
www.state.ma.us/mdfa/

Real estate development projects in an economic target area (ETA) are eligible for technical assistance funding. Awards range from \$5,000 to \$25,000 (\$20,000 for non-profits) and require a match. Projects must be eligible under Economic Development Financing Program. Activities and products include: market and feasibility analysis, preliminary architectural or engineering plans, appraisals, development consultants, structural or mechanical analysis, traffic studies, historic consultants, legal organization or titles, topographic mapping, civil survey, marketing, pre-leasing materials, and environmental testing.

MASSACHUSETTS HIGHWAY DEPARTMENT (MASS HWY)

Ref. # 57. TEA21 - Transportation Enhancement Funds

Contact: Linda Walsh: (617) 973-8052 or linda.walsh@state.ma.us

Summary: Funds for environmental remediation of transportation impacts; transportation improvements including pedestrian and bicycle pathways.

Eligibility: Municipalities apply through regional planning agencies.

Examples: Barnstable Walkway to the Sea (land acquisition for harbor access); stormwater remediation, best management practices, in Mashpee.

Schedule: Call for more information.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

EXECUTIVE OFFICE OF TRANSPORTATION AND CONSTRUCTION (EOTC)

Ref. # 59. **Mobility Assistance Program**
10 Park Plaza, Suite 3170, Boston, MA 02116
617-973-7062

The program assists with providing transportation for the elderly and persons with disabilities where public transportation is unavailable or insufficient. Grants pay for up to 80% of base costs of equipment such as buses and hardware.

Ref. # 60. **Public Works Economic Development**
10 Park Plaza, Suite 3170, Boston, MA 02116
617-973-8257

****SUBJECT TO HOUSING CERTIFICATION UNDER EO 418**** Funds the design, construction, reconstruction of existing and/or newly located public access roads, streets, bridges, curbing, sidewalks, lighting systems, traffic control and service facilities, drainage systems and culverts with associated best management practices (BMP's) for municipal economic development opportunities.

FEDERAL HIGHWAY ADMINISTRATION

Ref. # 61. **Transportation. & Community System Preservation (TCSP)**
400 Seventh St SW, Washington DC 20590
202-366-0106 - tcsp-fhwa.volpe.dot.gov/fedreg01/summary.html

Provides discretionary grants to plan and implement transportation strategies, which improve efficiency of the transportation system; reduce environmental impacts of transportation; reduce the need for costly future public infrastructure investments; ensure efficient access to jobs, services and centers of trade; and examine development patterns and identify strategies to encourage private sector development patterns which achieve these goals.

MASSACHUSETTS ENVIRONMENTAL TRUST

Ref. # 62 **Environmental Grants**

Contact: Robin Peach: (617) 727-0249

Summary: The Trust funds projects that: (1) encourage cooperative efforts to raise environmental awareness, and (2) support innovative approaches that can protect and preserve our natural resources, with a special focus on water and related land resources.

Eligibility: Non-profit, community associations, civic groups, schools and institutions for higher education, municipalities, and state agencies.

Match: See individual program guidelines.

\$ Range: See individual program guidelines.

Examples: Recipients have included the Coalition for Buzzards Bay, Springfield Science Museum, Pioneer Valley Planning Commission, Association for the Preservation of Cape Cod, and many others.

Schedule: Annual Request for Response is available on October and Letters of Inquiry are Due in December. All program guidelines are available on the Trust's web site. <http://www.agmconnect.org/maenvtr1.html>.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

MASSACHUSETTS TRUST

Ref. #63. **Jessie B. Cox Charitable Trust**
c/o Hemenway and Barnes
60 State St, Boston, MA 02109
617-557-9775 - www.agmconnect.org/cox.html

Provides grant assistance for projects including areas of philanthropic development and the environment. Funded projects have included park and open space initiatives for urban areas, and the development and expansion of community based foundations.

Ref. #64. **Johanna Favrot Fund**
National Trust for Historic Preservation
7 Faneuil Hall Market Place, 4th Floor, Boston, MA 02109
617-523-0885 - www.nthp.org/main/frontline/departments/financial.htm

Provides grants ranging from \$2,500 to \$25,000 to non-profit organizations, public agencies, for-profit businesses, and individuals for projects that contribute to the preservation or recapture of an authentic sense of place. Funds may be used for professional services in areas of architecture, planning, archaeology, media relations; sponsoring preservation conferences and workshops; and implementing innovative preservation education programs.

MASSACHUSETTS HISTORICAL COMMISSION (MHC)

Ref. #65. **Massachusetts Preservation Projects**
220 Morrissey Boulevard
Boston, MA 02125,
617-727-8470 - www.state.ma.us/sec/mhc/mhcform/formidx.htm

Provides funding for the acquisition, preservation, and rehabilitation of historic properties, landscapes and sites. Eligible properties must be listed in or eligible for listing in the State Register of Historic Places and be in municipal or private non-profit ownership. Predevelopment projects such as feasibility studies, plans and specifications, and historic structures reports are also eligible activities. This is a 50% matching grant program.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (DHCD)

Ref. #66. Municipal Incentive Grant Program

Contact: Don Martin, Program Coordinator: (617) 727-7001, x 404

Summary: The Municipal Incentive Grant Program (MIG) is designed to assist local government officials in the planning, management and operation of cities and towns, and in the training of local officials. The program provides grants to pay for consultant assistance and, in some cases, hardware and software. MIG funds enable communities, individually or working together, to address particular issues, define solutions and implement improvements in service delivery. Nonpoint source related plans may be eligible.

Eligibility: Must be a municipality, county government, or Regional Planning Agency. Maximum grants are \$35,000 for local and \$60,000 for regional projects.

Examples: Growth management strategies, affordable housing strategies, design of regional arrangements for service delivery, creation or enhancement of fiscal management practices, development of Geographic Information Systems (GIS).

Schedule: Call for more information.

Ref. #67. Community Development Action Grant (CDAG) Program

Contact: Carol Harper, Program Manager: (617) 727-7001 x483

Summary: This program provides primarily infrastructure support for projects promoting economic development. Project must demonstrate public benefit. CDAG funding limited to 50% of the total project cost; applicant must demonstrate financing commitments of public and private sources. CDAG funds the "minimum amount necessary to make the project feasible." All matching funds must be in place before CDAG funds can be expended.

Match: For each CDAG dollars, you need \$.50 local; and \$2.50 private.

\$ Range: \$100,000 to \$1,000,000.

Examples: Extension of water and/or sewer service to an industrial park. Road construction/improvement in industrial/commercial area with best management practices.

Eligibility: Municipalities only. These funds are to be utilized on public infrastructure projects and are intended to address substandard or blighted conditions. Land to be improved must be publicly owned. Pre-application process, followed by full application.

Schedule: Rolling admission program. Call for more information.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (DHCD) (Continued)

Ref. #68. Community Development Block Grant Program

Contact: Toni Hall, Community Development Specialist: (617) 727-7001, x428 Robert Shumeyko, Program Manager, (617) 727-7001, x 435

Summary: Support of community and economic development projects that benefit low and moderate income persons.

Funding: U.S. Department of Housing and Urban Development. DHCD administers competitive grant program for state's non-entitlement communities (e.g., under 50,000 population).

Eligibility: Municipalities under 50,000 population, either individually or in regional arrangements. Contact DHCD for application.

Examples: Use rehabilitation (includes septic system repairs), water and sewer improvements, public facilities construction and improvements, e.g., parks and playgrounds, planning, economic development, neighborhood revitalization. List of eligible projects is extensive. Call for details.

Schedule: Application for Community Development Fund I and II were due on or before August 1 in past years. (Community Development Fund usually has one competitive round annually).

Ref. #69. Grant Program for the Demolition of Abandoned Buildings

Contact: Marilyn Contreas, Program Coordinator: (617) 727-7001, x408

Summary: Grants to demolish abandoned buildings which are posing severe health and safety risks.

Eligibility: Municipalities. Must demonstrate health and safety risk factors caused by abandoned structures. Maximum grant award of \$250,000.

Example: Removal of abandoned residential and commercial properties primarily in densely settled areas.

Schedule: Rolling admission. Call for more information.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

U.S. DEPT. OF HEALTH & HUMAN SERVICES

Ref #70. Community Economic Development Funds

DHHS/ACF, 370 L'Enfant Promenade, Washington, DC 20447
202-401-9354 - www.acf.dhhs.gov/programs/ocs/#PA

Offers flexible funding for community development targeting low income populations, including planning.

COMMUNITY FOUNDATIONS

Ref # 71. Community Foundation of Cape Cod

PO Box 406, Yarmouthport, MA 02675
800-947-2322 - www.capecodfoundation.com

Provides grant assistance for projects including areas of arts and the environment. Funded projects have included publications, arts festivals, and environmental studies. Eligible projects must serve the people of Barnstable County.

Ref. # 72. Crossroads Community Foundation

20 Main St, Suite 301, Natick, MA 01760
508-647-2260 - www.ccfndn.org/

Provides grant assistance for projects including areas of: culture, environment, economic development, and capacity building. Funded projects have included assistance to local arts initiatives, historic preservation, environmental studies, non-profit agency strategic plans, and micro-loan programs. Limited to projects within 27 Metro West communities.

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

USDA RURAL DEVELOPMENT

Ref. # 73. Rural Business Enterprise Grants
451 West Street, Amherst, MA 01002
413-253-4318 - www.rurdev.usda.gov/rbs/busp/rbeg.htm

To support the development of small and emerging businesses, provides funds for the acquisition and development of land; construction of buildings, plants, equipment, access streets, parking areas, and utility service extensions; refinancing; professional services; technical assistance and related training; and startup operating costs and working capital, among others.

DEPARTMENT OF REVENUE

Ref. # 74. Underground Storage Tank Program

Contact: Stuart Glass, Grant Manager (617) 887-5978 or stuart.glass@state.ma.us

Summary: This program, administered by the Massachusetts Department of Revenue and funded annually (up to 2 million dollars) by the Underground Storage Tank Petroleum Cleanup Fund (MGL c21J), provides municipal grants for the removal and installation of underground storage tanks.

Eligibility: Municipalities.

\$ Range: Grants can be up to 50% of eligible costs

Schedule: Applications are accepted annually in the early Fall. Call for more information or visit www.state.ma.us/ust.

MASSACHUSETTS GOVERNOR'S OFFICE

Ref. # 75. Office for Brownfields Revitalization

The Commonwealth of Massachusetts is charting new territory to ensure the reclamation of idle industrial properties. The Governor's Office, in coordination with the Massachusetts Office of Business Development (MOBD) and the Department of Environmental Protection offers high level state assistance, flexible state financing, state tax credit and federal tax deduction, state-subsidized environmental insurance, privatized cleanup program and municipal tax abatement for reclaiming viable industrial properties.

J. Todd Fernandez , Director, e-mail: todd.ferandez@state.ma.us or
Nancy Jackson, Deputy Director, e-mail: nancy.jackson@state.ma.us
Ten Park Plaza, Suite 3720
Boston, MA 02116
617-973-8989

NONPOINT SOURCE AND COMMUNITY FUNDING RESOURCES

MASS DEVELOPMENT

Ref. # 76. Brownfields Redevelopment Fund

Contact: Marketing Department at: (617) 451-2477 or 1-800-445-8030

Summary: The Brownfields Redevelopment Fund provides state funding for loans and grants for site assessments and remediation actions. Administered by Mass Development, a quasi-public real estate and economic development agency, the fund is designed to address and resolve environmental issues related to development projects.

Eligibility: Municipalities, redevelopment authorities, redevelopment agencies, economic development and industrial corporations, community development corporations or economic development authorities.

\$ Range: Maximum site assessment financing is \$50,000; maximum cleanup financing is \$500,000

Schedule: Call for details or visit www.massdevelopment.com for more information.

MASSACHUSETTS HOUSING FINANCE AGENCY (MHFA)

Ref. # 77. Homeowner Septic Repair Loan Program

Contact: (617) 854-1020 or (617) 854-1333

Summary: Through a combined effort of the Department of Environmental Protection, the Massachusetts Department of Revenue, and the Massachusetts Housing Finance Agency, this program provides below market rates to homeowners upgrading septic systems.

Eligibility: Homeowner septic repair loans are available to eligible homeowners at low interest rates of 0%, 3%, and 5%, depending on income.

\$ Range: Homeowner loans range in size from \$1,000 to a maximum of \$25,000.

Schedule: Call for more information.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE

American and New England Studies

Boston University
617-353-2948
226 Bay State Rd, Boston, MA 02215
www.bu.edu

Graduate Preservation Studies program conducts studios and other special projects, including development of historic preservation plans, adaptive reuse studies, feasibility studies, etc.

Associated Grant Makers

Associated Grant Makers
617-426-2606
294 Washington Street, Suite 840, Boston, MA 02108
www.agmconnect.org

On a membership basis, provides technical assistance on writing grant applications, effective governance, and finding grant sources for community non-profits. Non-members can use the library of grants located in downtown Boston.

Board Development & Training

National Center for Nonprofit Boards
800-883-6262
1828 L Street NW, Suite 900, Washington, DC 20036-5104
www.ncnb.org/

NCNB offers technical assistance and training services in nonprofit board development, utilizing a national network of experts to help design and conduct programs covering a range of topics, including: board member responsibilities, developing a strong board, motivating a board in fund raising, building a strong board / staff partnership, managing conflicts of interest, and others.

Business & Industry Guaranteed Loans

USDA Rural Development

413-253-4318
451 West St, Amherst, MA 01002
www.rurdev.usda.gov/rbs/busp/b&i_dir.htm

Loan guarantees are made to improve, develop, or finance business, industry, and employment and to improve the economic and environmental climate in rural communities including pollution abatement and control. Available only to businesses located in areas outside the boundary of a city of 50,000 or more and its immediately adjacent urbanized area. May be used for real estate purchase or improvement, equipment, or working capital.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

Chapter 79A Relocation

Department of Housing & Community Development (DHCD)

617-727-7001 x 417

One Congress St, 10th Floor, Boston, MA 02114

www.state.ma.us/dhcd/

Provides assistance and oversight to state and local agencies undertaking projects which result in the displacement of businesses or residents, such as real estate acquisition for a municipal parking lot.

Community Partners Program

National Trust for Historic Preservation

617-523-0885

7 Faneuil Hall Market Place, 4th Floor, Boston, MA 02109

www.nthp.org/main/frontline/departments/financial.htm

The program is a neighborhood-based initiative to demonstrate the effectiveness of "preservation-based community development." Demonstration projects include: the use of flexible preservation standards for affordable housing, creation of real estate financing mechanisms for the reuse of historic buildings that benefit low-income neighborhoods, and the formation of new community-based development corporations in historically significant minority neighborhoods.

Cultural Funding: Federal

National Endowment for the Arts

www.arts.gov/federal.html

Clearinghouse for federal grant programs with an arts component.

Department of Urban Studies

Massachusetts Institute of Technology

617-253-2024

77 Massachusetts Ave, Cambridge, MA 02139

dusp.mit.edu/DUSP/main/html/main.lasso

MIT is a source for interns and special field studies in design and development, economic development, and community development with integrated best management practices.

Dept. of Landscape Architecture & Regional Planning

University of Massachusetts at Amherst

413-545-2255

109 Hills North, UMass, Amherst, MA 01003

www.umass.edu/larp/

An outreach program that provides assistance to communities, particularly through graduate studies in areas of landscape architecture, planning, urban design, and economic development. Participating programs include: Landscape Architecture, Regional Planning, the Center for Economic Development, the Center for Rural Massachusetts, and the Urban Places Project.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

ECONOMIC DEVELOPMENT TECHNICAL ADVISORY SERVICE

Council for Urban Economic Development

202-223-4735

1730 K St NW, Suite 700, Washington, DC 20006

www.cued.org/technical/technicalassistance.html

CUED's Technical Advisory Service provides assistance to communities in a wide range of economic development areas, including real estate redevelopment, business attraction and retention, strategic planning, brownfields remediation, and technology transfer. For a fee, CUED staff will assemble a team of experts to perform a site visit and assess a community's problems, needs, and opportunities.

ENERGY EFFICIENCY PROGRAM

Division of Energy Resources (DOER)

70 Franklin St, 7th Floor, Boston, MA 02110-1313

617-727-4732 - www.state.ma.us/doer/programs/pub_bld/pub_bld.htm#eep

Helps communities reduce energy costs with little or no capital expenditure. Communities can use the technical assistance available for privately financed renovation projects or for design review services of new construction projects.

ENVIRONMENTAL PROGRAM

Manufacturing Extension Partnership

301-975-5104

NIST/MEP, Bldg 301/C121, Gaithersburg, MD 20899

es.epa.gov/oeca/fedfac/initiati/nistmep4.html

Through a partnership with EPA, helps small manufacturers become environmentally competitive and adopt cleaner manufacturing processes. Includes training and technology and information resource centers.

FEDERAL HIST. PRESERVATION TAX CREDIT INCENTIVES

Heritage Preservation Services, National Park Service

National Park Service, 1849 C Street NW, Washington, DC 20240

202-343-9583 - www2.cr.nps.gov/tps/tax/tax_t.htm

Provides a 20% federal income tax credit for the substantial rehabilitation of income-producing properties listed in or eligible for listing in the National Register of Historic Places. All rehabilitation work must meet the Secretary of the Interior's Standards for Rehabilitation. A 10% credit exists for the rehabilitation of non-historic buildings.

GRADUATE SCHOOL OF DESIGN

Harvard University

Urban Planning & Design 617-495-9571

48 Quincy St, Room 312, Cambridge, MA 02138

www.gsd.harvard.edu/

Offers graduate design studios in urban planning and design.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

HISTORIC PRESERVATION/COMMUNITY REVITALIZATION

Historic Massachusetts

617-723-3383

45 School St, Boston, MA 02108

www.historicmass.org

Provides technical assistance through its educational and technical assistance programs, "Action Teams," which can assess specific preservation development problems or issues, and community forums on various topics related to historic preservation. Also has a small loan program that offers gap financing for preservation related real estate development projects. Loan assistance focuses on regions and communities established as priorities by HMI.

HOW TO OBTAIN HOUSING ASSISTANCE IN MASSACHUSETTS

Department of Housing & Community Development (DHCD)

617-727-7765

One Congress St, 10th Floor, Boston, MA 02114

www.state.ma.us/dhcd/publications/assist/default.htm

This publication for citizens is a reference guide to public housing, rental, homeowner, and homeless assistance resources.

JOHN W. MCCORMACK INSTITUTE OF PUBLIC AFFAIRS

University of Massachusetts at Boston

Urban Affairs 617-287-5550

100 Morrissey Blvd, Dorchester, MA 02125

www.umb.edu

Provides forums, conferences, lectures, etc. on a variety of topics, including urban affairs and economics.

MANUFACTURING PRODUCTIVITY

Massachusetts Manufacturing Extension Partnership

800-MEP-4MFG

10 Park Plaza, Ste 3720, Boston, MA 02116

www.massmep.org/

Small to mid-size manufacturing companies are eligible for assistance in a variety of areas, including: productivity, quality control, ISO 9000, business planning, market development, regulatory compliance, and training. Services are provided through regional centers.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

MASSACHUSETTS DOWNTOWN INITIATIVE

Department of Housing & Community Development (DHCD)

617-727-7001 x 426

One Congress St, Boston, MA 02114

www.state.ma.us/dhcd/components/dcs/downtown/default.htm

Provides direct and indirect assistance on all topics of downtown revitalization, including organizational development, community involvement, economic development, streetscapes and design, public safety, transportation and parking, and housing.

MASSACHUSETTS HIGH RISK CONSORTIUM

Various

City of Lawrence, 978-794-5891

Community Development Dept.

225 Essex Street, Lawrence, MA 01840

Agencies participating in the Consortium provide grants, loans, and guidance for owners seeking to de-lead residential units occupied by low and moderate income families. Grants range from \$2,500 - 5,000, and staff provide substantial assistance in obtaining matching funds from other local and state programs. Technical assistance includes: inspection (testing), bidding and contracting with de-leaders, hazardous waste disposal, construction oversight, and complying with state regulations. Assistance is limited to Chelsea, New Bedford, Fall River, Lawrence, and Brockton.

MA PEDESTRIAN TRANSPORTATION PLAN

Massachusetts Highway Department

c/o Wallace, Floyd, Associates Inc. 617-350-7400

273 Summer Street, Boston, MA 02210

www.wallacefloyd.com/pedplan/index.htm

Report chronicling why people walk, the importance of walking in communities, and how to plan for pedestrians. Also provides a list of funding resources.

MASTER OF ARTS PROGRAM

Conway School of Landscape Design

413-369-4044

PO Box 179, Conway, MA 01341

www.csld.edu

Provides professional quality studies for governmental and non-profit organizations in areas of landscape planning and design with integrated best management practices.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

MEP WORKFORCE INITIATIVE

NIST Manufacturing Extension Partnership

800-637-4634

CBWL, The Schrafft Center, 529 Main St, Boston, MA 02129

www.mep.nist.gov/index.html

Helps small to mid-size manufacturing companies improve competitiveness through training in human resources and technology. The 1-800 number will automatically connect you to your regional center.

NEIGHBORWORKS

Neighborhood Reinvestment Corporation

617-450-0410

607 Boylston St, 5th Floor, Boston, MA 02116-4802

www.nw.org

NeighborWorks is a membership network of community nonprofits. Services include The NeighborWorks Campaign for Home Ownership 2002, a joint effort to offer home ownership to families with modest income; technical assistance and collaboration to strengthen members' internal operations; preservation of affordable housing and expansion of credit; and training and information. Membership is open to community-based nonprofits that focus on neighborhood revitalization.

NATURAL RESOURCES CONSERVATION SERVICES (NRCS)

413-253-4350

451 West Street, Amherst, MA 01002-2995

www.nrcs.usda.gov

Conservation Technical Assistance (CTA)

The purpose of the program is to assist land-users, communities, units of state and local government, and other Federal agencies in planning and implementing conservation systems. The purpose of the conservation systems are to reduce erosion, improve soil and water quality, improve and conserve wetlands, enhance fish and wildlife habitat, improve air quality, improve pasture and range condition, reduce upstream flooding, and improve woodlands.

Objectives of the program are to:

Assist individual landusers, communities, conservation districts, and other units of State and local government and Federal agencies to meet their goals for resource stewardship and assist individuals to comply with State and local requirements. NRCS assistance to individuals is provided through conservation districts in accordance with the memorandum of understanding signed by the Secretary of Agriculture, the governor of the state, and the conservation district. Assistance is provided to land users voluntarily applying conservation and to those who must comply with local or State laws and regulations.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE

(Continued)

Conservation Plant Material Centers

The purpose of the program is to provide native plants that can help solve natural resource problems. Beneficial uses for which plant material may be developed include biomass production, carbon sequestration, erosion reduction, wetland restoration, water quality improvement, streambank and riparian area protection, coastal dune stabilization, and other special conservation treatment needs. Scientists at the Plant Materials Centers seek out plants that show promise for meeting an identified conservation need and test their performance. After species are proven, they are released to the private sector for commercial production. The work at the 26 centers is carried out cooperatively with state and Federal agencies, commercial businesses, and seed and nursery associations.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Soil Survey Programs

The National Cooperative Soil Survey Program (NCSS) is a partnership led by NRCS of Federal land management agencies, state agricultural experiment stations and state and local units of government that provide soil survey information necessary for understanding, managing, conserving and sustaining the nation's limited soil resources.

For additional information contact the USDA Natural Resources Conservation Service office serving your county. Your USDA Service Center is listed in the telephone book under U.S. Department of Agriculture.

Pedestrian & Bicycle

Federal Highway Administration

National Bicycle and Pedestrian Clearinghouse 800-760-NBPC
1506 21st St NW, Suite 210, Washington, DC 20036
www.ota.fhwa.dot.gov/walk/resource/psrdm129.htm

Offers publications on a variety of topics, including: design, safety, funding, education, implementation, and planning.

Pedestrian

Walkable Communities, Inc.

904-454-3004
320 S. Main Street, High Springs, FL 32643
www.walkable.org

Offers training workshops, videos, and other resources on planning for pedestrians, traffic calming, pedestrian safety, and other issues.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

Peer To Peer

Department of Housing & Community Development (DHCD)

617-727-7001 x 404

One Congress St, 10th Floor, Boston, MA 02114

www.state.ma.us/dhcd/

Matches communities with an experienced peer from another community, regional planning agency, or other organization in order to provide short term assistance on a specific topic. Examples include getting started with a downtown organization, outlining an affordable housing strategy, and conducting a visioning session. DHCD provides a grant to the community to pay a peer an hourly wage and travel expenses. Grants are capped at \$850.

Port and Harbor Planning

MA Coastal Zone Management

617-626-1200

251 Causeway St, Suite 900, Boston, MA 02114

www.state.ma.us/czm/phpp2.htm

MCZM provides assistance to communities in developing harbor plans and encourages the creation and expansion of water-dependent facilities in developed port and harbor areas.

Public Building Accessibility

Massachusetts Architectural Access Board (AAB)

617-727-0660

One Ashburton Place, Room 1310, Boston, MA 02108

www.state.ma.us/aab

The Architectural Access Board (AAB) is a regulatory agency within the Massachusetts Executive Office of Public Safety. It is responsible for developing and enforcing regulations designed to make public buildings accessible to, functional for, and safe for use by persons with disabilities. The AAB website offers information on applicable accessibility regulations in MA and the regulatory role of the AAB in public projects.

Publications on Intermodal Transportation

Federal Transit Administration

202-366-5781

Office of Intermodalism (S-3), 400 Seventh Street, SW, Washington, DC 20590

www.bts.gov/ntl/DOCS/453.html

Titles include Sourcebook on Transit-Related Environmental Regulations, Planning & Environmental Training Catalogue, Characteristics of Urban Transportation Systems, and Intermodal Technical Assistance for Transportation Planners and Policymakers. Many other reports available also.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

Preservation of Religious Buildings

Partners for Sacred Places

215-567-3234

1700 Sansom St, 10th Floor, Philadelphia, PA 19103

www.sacredplaces.org/index.htm

Provides a clearinghouse of information and publications on restoring and maintaining religious buildings and other related topics.

Preservation Planning

Massachusetts Historical Commission

617-727-8470

220 Morrissey Boulevard, Boston, MA 02125

www.state.ma.us/sec/mhc/mhchpp/ppdhpp.htm

Provides technical assistance on a wide range of topics related to historic preservation. Areas of interest include: historic resource inventories, nominations to the National Register of Historic Places, development of preservation plans, local historic districts, and creation of design guidelines.

Railroad Station Revitalization

The Great American Station Foundation

505-426-8055

615 E. Lincoln Ave, Las Vegas, NM 87701

www.stationfoundation.org/

Promotes community economic development by preserving railroad stations and transforming them into improved centers of transportation and commerce. Provides technical assistance in areas of planning, preservation, design, financing, retail, transportation, etc. Also provides grants and loans for projects that will enhance transportation and stimulate community economic development. Only active rail stations are eligible for assistance.

Rural Community Assistance Program (RCAP)

RHI, Inc., The Northeastern RCAP

508-297-5300

218 Central Street, PO Box 429, Winchendon, MA 01475

The Northeastern Rural Community Assistance Program (RCAP) is a program of Rural Housing Improvement, Inc. (RHI), a private, nonprofit, community based organization. The program is funded by a variety of federal sources. RCAP provides technical assistance to communities on water and waste management issues. While focusing on the water and wastewater management problems of individual communities, this program also seeks to promote a regional watershed perspective.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

Small Business Assistance

Massachusetts Small Business Development Center Network

413-545-6301

Umass, 205 Isenberg School of Management, Amherst, MA 01003-4935

msbdc.som.umass.edu/network.html

Massachusetts Office of Business Development's Small Business Development Centers provide one-to-one counseling and workshops to prospective and existing small businesses. Counseling services include: business and financial plan development, domestic and international marketing analysis, cash flow management, and human resource issues. Specific training programs are offered for a fee. Assistance is also provided in areas of financing, entrepreneurial training, and securing state government contracts.

Tax Increment Financing (TIF)

Department of Economic Development (DED)

1-800-5-CAPITAL

Main office: 10 Park Plaza, Suite 3720, Boston, MA 02116

www.magnet.state.ma.us/mobd/finance_services.html

TIF authorizes communities to exempt all or part of the increased value of a land parcel based on the development of that parcel for up to 20 years. The tax exemption may take the form of abatements, betterments, and a negotiation for lower real estate taxes. Characteristics of a typical TIF project include site-specific disadvantages to development and a reasonable probability of generating benefits. TIFs can be utilized within Economic Opportunity Areas (EOAs) and within TIF zones.

Traffic Calming Publications

Public Technology, Inc.

800-852-4934

1301 Pennsylvania Ave NW, Suite 800, Washington DC 20004

pti.nw.dc.us/task_forces/transportation/docs/trafcalm/

"Slow Down, You're Going Too Fast: The Community Guide To Traffic Calming" is a report covering the basics of traffic calming and discussing examples from around the country. PTI is the non-profit technology arm of the National League of Cities, the National Association of Counties, and the International City/County Management Association.

Urban Places Project

University of Massachusetts at Amherst

413-545-6631

Urban Places Project, 109 Hills North, UMass, Amherst, MA 01033

www-unix.oit.umass.edu/~upp

Through the UMass Department of Landscape Architecture and Urban Planning the Urban Places Project provides urban design and neighborhood planning services to low income, central neighborhoods in mid-sized cities.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE (Continued)

Urban Studies

Tufts University

617-627-3165

97 Talbot Ave, Dept of Urban & Environmental Policy, Medford, MA 02155

www.tufts.edu

Provides interns and planning studies through the undergraduate programs in Urban Studies and Architectural Studies and through the graduate program in Urban and Environmental Policy.

Various Sources

The Enterprise Foundation

410-964-1230

10227 Wincoppin Circle, Suite 500, Columbia, MD 21044

www.enterprisefoundation.org/default.asp

Assists community-based organizations and local governments in improving poor neighborhoods by providing low-interest loans, grants, and equity to finance affordable housing. Provides training to development professionals on a variety of topics. Also offers an extensive list of publications.

Various Publications

800-852-4934

1301 Pennsylvania Ave NW, Suite 800, Washington DC 20004

pti.nw.dc.us/publications/pubs.pdf

Titles include "Habitat for Humanity: Developing an Ecological Model Community," "Demand Side Management in Public Housing," and "Green Habitat Learning Project: A Green Builder Model Home Project." Most publications are under \$20.

Various Publications

Public Technology, Inc.

800-852-4934

1301 Pennsylvania Ave NW, Suite 800, Washington DC 20004

pti.nw.dc.us/publications/pubs.pdf

Topics address air quality, alternative fuels, improved efficiency in fleet vehicles, telecommuting and commuter efficiency, and "intelligent transportation systems" for local governments.

Wholesale & Alternative Markets Program

U.S. Department of Agriculture

202-720-8317

Agricultural Marketing Service, USDA, 1400 Independence Ave SW,
Washington, DC 20090

www.ams.usda.gov/tmd/markets/index.htm

Goal of the Wholesale and Alternative Markets Program is to promote regional economic development and improve market access for the small and medium sized farmer. Program activities include planning and design of facilities, including Farmers' Markets, in cooperation with government, farmers and segments of the U.S. food industry.

COMMUNITY RESOURCES: TECHNICAL ASSISTANCE
(Continued)

WPI Projects Program

Worcester Polytechnic Institute

508-831-5457

Project & Registration Office, 100 Institute Rd, Worcester, MA 01609

www.wpi.edu/Academics/Projects/intro.html

Provides professional quality studies for private, governmental, and non-profit organizations in a variety of WPI disciplines including environmental engineering and planning.

VIII. SUMMARY

The Massachusetts Nonpoint Source Management Plan has been carefully crafted to optimize present capabilities and expertise. Successful implementation of the Plan over the next five years depend upon strong leadership from EOEA and DEP management and close cooperation from all the various federal, state, regional and environmental groups involved. There is commitment from the leadership and there does exist a spirit of cooperation among the various government and non-government agencies, especially within the context of the Watershed Initiative. A third important ingredient for successful implementation of the Plan is an identified agency or office, which will provide the day-to-day and year-to-year driving force behind this effort. This agency has been identified as the Division of Watershed Management within DEP's Bureau of Resource Protection. Personnel assigned to the Nonpoint Source Program will coordinate the management plan and lend its support whenever and wherever it is needed. Financial resources are not abundant and in many circumstances implementation will have to be achieved under current capabilities. Portions of the plan (e.g., targeted watershed projects; Volume I) will depend upon the availability of financial resources. In the final analysis, however, the success of the Nonpoint Source Plan will depend upon public education and awareness of the issues.

The Commonwealth of Massachusetts also recognizes the importance of working in concert with the EPA to effectuate meaningful controls of nonpoint sources of pollution to reach the goal of acceptable water quality in the waters of the Commonwealth. The role that EPA plays under its various authorities to share in the leadership position of setting priorities for nonpoint source pollution control is much appreciated. A close partnership between the federal and state agencies can and will go a long way in ensuring successful implementation of this plan. The successful Performance Partnership Agreement indicates a high level commitment to ensuring a lasting partnership.

The management plan is aggressive and optimistic. Experience has shown that execution of any plan depends upon the people involved and the resources available. There will undoubtedly be some shifts in priority in terms of strict adherence to the milestone schedule as circumstances warrant. The annual report to the EPA and the midyear review process will allow the Commonwealth and EPA to review progress and, if necessary, adjust priorities.

There is little doubt that as the states progress in their efforts to control and reduce point sources of pollution, the issue and magnitude of nonpoint sources of pollution will become self-evident. Congress realized this by amending the Clean Water Act and CZM Act to include nonpoint source programs. Massachusetts embraces this initiative and by means of this management plan sets forth to control nonpoint sources of pollution with a commitment to preserving and enhancing the Commonwealth's water resources.